```
                                              M  1

BBBBBBBBBBBB        AAAAAAAAA        SSSSSSSSSSSS  RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
BBBBBBBBBBBB        AAAAAAAAA        SSSSSSSSSSSS  RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
BBBBBBBBBBBB        AAAAAAAAA        SSSSSSSSSSSS  RRRRRRRRRRRR     TTTTTTTTTTTTTTT  LLL
BBB         BBB  AAA         AAA  SSS              RRR         RRR        TTT        LLL
BBB         BBB  AAA         AAA  SSS              RRR         RRR        TTT        LLL
BBB         BBB  AAA         AAA  SSS              RRR         RRR        TTT        LLL
BBB         BBB  AAA         AAA  SSS              RRR         RRR        TTT        LLL
BBB         BBB  AAA         AAA  SSS              RRR         RRR        TTT        LLL
BBB         BBB  AAA         AAA  SSS              RRR         RRR        TTT        LLL
BBBBBBBBBBBB     AAA         AAA     SSSSSSSSS     RRRRRRRRRRRR           TTT        LLL
BBBBBBBBBBBB     AAA         AAA     SSSSSSSSS     RRRRRRRRRRRR           TTT        LLL
BBBBBBBBBBBB     AAA         AAA     SSSSSSSSS     RRRRRRRRRRRR           TTT        LLL
BBB         BBB  AAAAAAAAAAAAAAA              SSS  RRR   RRR              TTT        LLL
BBB         BBB  AAAAAAAAAAAAAAA              SSS  RRR   RRR              TTT        LLL
BBB         BBB  AAAAAAAAAAAAAAA              SSS  RRR   RRR              TTT        LLL
BBB         BBB  AAA         AAA              SSS  RRR      RRR           TTT        LLL
BBB         BBB  AAA         AAA              SSS  RRR      RRR           TTT        LLL
BBB         BBB  AAA         AAA              SSS  RRR      RRR           TTT        LLL
BBBBBBBBBBBB     AAA         AAA  SSSSSSSSSSSS     RRR         RRR        TTT        LLLLLLLLLLLLLLL
BBBBBBBBBBBB     AAA         AAA  SSSSSSSSSSSS     RRR         RRR        TTT        LLLLLLLLLLLLLLL
BBBBBBBBBBBB     AAA         AAA  SSSSSSSSSSSS     RRR         RRR        TTT        LLLLLLLLLLLLLLL
```

```
**FILE**ID**BASTERMIO                                    C 6

BBBBBBBB      AAAAAA      SSSSSSSS  TTTTTTTTTT  EEEEEEEEEE  RRRRRRRR    MM      MM    IIIIII      OOOOOO
BBBBBBBB      AAAAAA      SSSSSSSS  TTTTTTTTTT  EEEEEEEEEE  RRRRRRRR    MM      MM    IIIIII      OOOOOO
BB      BB  AA      AA  SS              TT      EE          RR      RR  MMMM  MMMM      II      OO      OO
BB      BB  AA      AA  SS              TT      EE          RR      RR  MMMM  MMMM      II      OO      OO
BB      BB  AA      AA  SS              TT      EE          RR      RR  MM  MM  MM      II      OO      OO
BB      BB  AA      AA  SS              TT      EE          RR      RR  MM  MM  MM      II      OO      OO
BBBBBBBB    AA      AA    SSSSSS        TT      EEEEEEEE    RRRRRRRR    MM      MM      II      OO      OO
BBBBBBBB    AA      AA    SSSSSS        TT      EEEEEEEE    RRRRRRRR    MM      MM      II      OO      OO
BB      BB  AAAAAAAAAA          SS      TT      EE          RR  RR      MM      MM      II      OO      OO
BB      BB  AAAAAAAAAA          SS      TT      EE          RR  RR      MM      MM      II      OO      OO
BB      BB  AA      AA          SS      TT      EE          RR    RR    MM      MM      II      OO      OO      ....
BB      BB  AA      AA          SS      TT      EE          RR    RR    MM      MM      II      OO      OO      ....
BBBBBBBB    AA      AA  SSSSSSSS        TT      EEEEEEEEEE  RR      RR  MM      MM    IIIIII      OOOOOO        ....
BBBBBBBB    AA      AA  SSSSSSSS        TT      EEEEEEEEEE  RR      RR  MM      MM    IIIIII      OOOOOO        ....

LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
;     1         0001  0 MODULE BAS$UPI_TERM_IO (                          ! Terminal I/O UPI level
;     2         0002  0                 IDENT = '1-007'                   ! File: BASTERMIO.B32 EDIT: PLL1007
;     3         0003  0                 ) =
;     4         0004  1 BEGIN
;     5         0005  1 !
;     6         0006  1 !****************************************************************************
;     7         0007  1 !*                                                                          *
;     8         0008  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
;     9         0009  1 !*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                  *
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;    20         0020  1 !*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT   *
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;    22         0022  1 !*                                                                          *
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;    24         0024  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
;    25         0025  1 !*                                                                          *
;    26         0026  1 !*                                                                          *
;    27         0027  1 !****************************************************************************
;    28         0028  1 !
;    29         0029  1
;    30         0030  1 !++
;    31         0031  1 ! FACILITY: Basic support library - User callable
;    32         0032  1 !
;    33         0033  1 ! ABSTRACT:
;    34         0034  1 !
;    35         0035  1 ! Provides the User Program Interface (UPI) level of support for Basic
;    36         0036  1 ! terminal I/O.
;    37         0037  1 !
;    38         0038  1 ! ENVIRONMENT:  User access mode; AST reentrant
;    39         0039  1 !
;    40         0040  1 ! AUTHOR:       Donald G. Petersen, CREATION DATE: 23-Aug-79
;    41         0041  1 !
;    42         0042  1 ! MODIFIED BY:
;    43         0043  1 !
;    44         0044  1 ! 1-001 - Original done in Macro-32, BASIOELEM.MAR.  DGP 20-Mar-78
;    45         0045  1 ! 1-002 - Rewrite BASIOELEM.MAR in Bliss.  DGP 23-Aug-79
;    46         0046  1 ! 1-003 - Make the BAS$ entry points GLOBAL.  JBS 12-SEP-1979
;    47         0047  1 ! 1-004 - Add BAS$IN_W_R.  JBS 12-SEP-1979
;    48         0048  1 ! 1-004 - Add linkages to CALL of UDF routines.  DGP 12-Sep-79
;    49         0049  1 ! 1-005 - BAS$OUT_D_V_B incorrectly uses a semicolon format character.  DGP
;    50         0050  1 !         17-Sep-79
;    51         0051  1 ! 1-006 - Add support for byte, gfloat, and hfloat.  PLL 24-Aug-81
;    52         0052  1 ! 1-007 - Add support for packed decimal.  PLL 5-Oct-81
;    53         0053  1 !--
;    54         0054  1
;    55         0055  1 !<BLF/PAGE>
;     57        0056    1 !
;     58        0057    1 ! SWITCHES
;     59        0058    1 !
;     60        0059    1
;     61        0060    1 SWITCHES ADDRESSING_MODE (EXTERNAL = GENERAL, NONEXTERNAL = WORD_RELATIVE);
;     62        0061    1
;     63        0062    1 !
;     64        0063    1 ! LINKAGES
;     65        0064    1 !
;     66        0065    1
;     67        0066    1 REQUIRE 'RTLIN:BASLNK';                               ! some Basic linkages
;     68        0143    1
;     69        0144    1 REQUIRE 'RTLIN:OTSLNK';                               ! define all other linkages
;     70        0573    1
;     71        0574    1 !
;     72        0575    1 ! TABLE OF CONTENTS:
;     73        0576    1 !
;     74        0577    1
;     75        0578    1 FORWARD ROUTINE
;     76        0579    1     BAS$IN_L_R : NOVALUE,                             ! Input longword by reference
;     77        0580    1     BAS$IN_W_R : NOVALUE,                             ! Input word by reference
;     78        0581    1     BAS$OUT_L_V_S : NOVALUE,                          ! output long by value, semi format char
;     79        0582    1     BAS$OUT_L_V_C : NOVALUE,                          ! output long by val, comma format char
;     80        0583    1     BAS$OUT_L_V_B : NOVALUE,                          ! output long by val, no format char
;     81        0584    1     BAS$IN_F_R : NOVALUE,                             ! input single float by ref
;     82        0585    1     BAS$OUT_F_V_S : NOVALUE,                          ! output float by val, semi format char
;     83        0586    1     BAS$OUT_F_V_C : NOVALUE,                          ! output float by val, comma format char
;     84        0587    1     BAS$OUT_F_V_B : NOVALUE,                          ! output float by val, no format char
;     85        0588    1     BAS$IN_D_R : NOVALUE,                             ! input double float by ref
;     86        0589    1     BAS$OUT_D_V_S : NOVALUE,                          ! output double by val, semi format char
;     87        0590    1     BAS$OUT_D_V_C : NOVALUE,                          ! output double by val, comma fcrmat char
;     88        0591    1     BAS$OUT_D_V_B : NOVALUE,                          ! output double by val, no format char
;     89        0592    1     BAS$IN_T_DX : NOVALUE,                            ! input text by descriptor
;     90        0593    1     BAS$OUT_T_DX_S : NOVALUE,                         ! output text by desc, semi format char
;     91        0594    1     BAS$OUT_T_DX_C : NOVALUE,                         ! output text by desc, comma format char
;     92        0595    1     BAS$OUT_T_DX_B : NOVALUE,                         ! output text by desc, no format char
;     93        0596    1     BAS$OUT_G_V_S : NOVALUE,                          ! output G by value, semi format
;     94        0597    1     BAS$OUT_G_V_C : NOVALUE,                          ! output G by value, comma format
;     95        0598    1     BAS$OUT_G_V_B : NOVALUE,                          ! output G by value, no format
;     96        0599    1     BAS$OUT_H_V_S : NOVALUE,                          ! output H by value, semi format
;     97        0600    1     BAS$OUT_H_V_C : NOVALUE,                          ! output H by value, comma format
;     98        0601    1     BAS$OUT_H_V_B : NOVALUE,                          ! output H by value, no format
;     99        0602    1     BAS$OUT_P_DX_S : NOVALUE,                         ! output packed by desc, semi format
;    100        0603    1     BAS$OUT_P_DX_C : NOVALUE,                         ! output packed by desc, comma format
;    101        0604    1     BAS$OUT_P_DX_B : NOVALUE,                         ! output packed by desc, no format
;    102        0605    1     BAS$IN_G_R : NOVALUE,                             ! input G by ref
;    103        0606    1     BAS$IN_H_R : NOVALUE,                             ! input H by ref
;    104        0607    1     BAS$IN_B_R : NOVALUE,                             ! input byte by ref
;    105        0608    1     BAS$IN_P_DX : NOVALUE;                            ! input packed by desc
;    106        0609    1
;    107        0610    1 !
;    108        0611    1 ! INCLUDE FILES:
;    109        0612    1 !
;    110        0613    1
;    111        0614    1 REQUIRE 'RTLIN:RTLPSECT';                             ! PSECT macros
;    112        0709    1
;    113        0710    1 REQUIRE 'RTLML:BASPAR';                               ! Some Basic symbols
;  114           0732   1
;  115           0733   1 REQUIRE 'RTLML:OTSISB';                                  ! I/O statement block (ISB)
;  116           0901   1
;  117           0902   1 REQUIRE 'RTLML:OTSLUB';                                  ! logical unit block (LUB)
;  118           1042   1
;  119           1043   1 LIBRARY 'RTLSTARLE';                                     ! STARTLET library for macros
;  120           1044   1
;  121           1045   1 !
;  122           1046   1 ! MACROS:
;  123           1047   1 !
;  124           1048   1 !     NONE
;  125           1049   1 !
;  126           1050   1 ! PSECT DECLARATIONS:
;  127           1051   1 !
;  128           1052   1 DECLARE_PSECTS (BAS);                                    ! PSECTs for BAS$ facility
;  129           1053   1 !
;  130           1054   1 ! EQUATED SYMBOLS:
;  131           1055   1 !
;  132           1056   1
;  133           1057   1 LITERAL
;  134           1058   1     K_BYTE_LEN = 1,                                      ! storage size in bytes of byte
;  135           1059   1     K_WORD_LEN = 2,                                      ! storage size in bytes of word
;  136           1060   1     K_LONG_LEN = 4,                                      ! storage size in bytes of longword
;  137           1061   1     K_FLOAT_LEN = 4,                                     ! storage size in bytes of float
;  138           1062   1     K_DOUBLE_LEN = 8,                                    ! storage size in bytes of double
;  139           1063   1     K_GFLOAT_LEN = 8,                                    ! storage size in bytes of gfloat
;  140           1064   1     K_HFLOAT_LEN = 16;                                   ! storage size in bytes of hfloat
;  141           1065   1
;  142           1066   1 !
;  143           1067   1 ! OWN STORAGE:
;  144           1068   1 !
;  145           1069   1 !     NONE
;  146           1070   1 !
;  147           1071   1 ! EXTERNAL REFERENCES:
;  148           1072   1 !
;  149           1073   1
;  150           1074   1 EXTERNAL ROUTINE
;  151           1075   1     BAS$$UDF_RL1 : CALL_CCB,                     ! UDF level element transmitter - Read
;  152           1076   1                                                  ! list directed
;  153           1077   1     BAS$$STOP : NOVALUE;                         ! signal an error and stop
;  154           1078   1
;  155           1079   1 EXTERNAL LITERAL
;  156           1080   1     BAS$K_DATTYPERR;                                     ! data type error
;  157           1081   1
;  158           1082   1 EXTERNAL
;  159           1083   1     OTS$$A_CUR_LUB,                                      ! Contains addr. of current LUB/ISB/RAB
;  160           1084   1     BAS$$AA_UDF_PR1 : VECTOR;                            ! dispatch vector to UDF element transmitters
;  161           1085   1
;  163      1086  1 GLOBAL ROUTINE BAS$IN_L_R (                      ! input longword by ref
;  164      1087  1         ELEM                                     ! element to input by reference
;  165      1088  1     ) : NOVALUE =                                !
;  166      1089  1
;  167      1090  1 !++
;  168      1091  1 ! FUNCTIONAL DESCRIPTION:
;  169      1092  1 !
;  170      1093  1 ! Input a longword, the destination is passed by reference
;  171      1094  1 !
;  172      1095  1 ! FORMAL PARAMETERS:
;  173      1096  1 !
;  174      1097  1 !       ELEM.rl.r               where to store the longword input
;  175      1098  1 !
;  176      1099  1 ! IMPLICIT INPUTS:
;  177      1100  1 !
;  178      1101  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  179      1102  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  180      1103  1 !
;  181      1104  1 ! IMPLICIT OUTPUTS:
;  182      1105  1 !
;  183      1106  1 !       NONE
;  184      1107  1 !
;  185      1108  1 ! COMPLETION CODES:
;  186      1109  1 !
;  187      1110  1 !       NONE
;  188      1111  1 !
;  189      1112  1 ! SIDE EFFECTS:
;  190      1113  1 !
;  191      1114  1 !       NONE
;  192      1115  1 !
;  193      1116  1 !--
;  194      1117  1
;  195      1118  2     BEGIN
;  196      1119  2
;  197      1120  2     GLOBAL REGISTER
;  198      1121  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  199      1122  2
;  200      1123  2     CCB = .OTS$$A_CUR_LUB;
;  201      1124  2     BAS$$UDF_RL1 (DSC$K_DTYPE_L,                 ! data type longword
;  202      1125  2         K_LONG_LEN,                              ! length of data type
;  203      1126  2         .ELEM,                                   ! address of destination
;  204      1127  2         BAS$K_NULL);                             ! null format character
;  205      1128  2     RETURN;
;  206      1129  1     END;                                         !End of BAS$IN_L_R

                                                                  .TITLE  BAS$UPI_TERM_IO
                                                                  .IDENT  \1-007\

                                                                  .EXTRN  BAS$$UDF_RL1, BAS$$STOP
                                                                  .EXTRN  BAS$K_DATTYPERR
                                                                  .EXTRN  OTS$$A_CUR_LUB, BAS$$AA_UDF_PR1

                                                                  .PSECT  _BAS$CODE,NOWRT,  SHR,  PIC,2

                                                 0800 00000       .ENTRY  BAS$IN_L_R, Save R11              ; 1086
                                5B 00000000G  00  D0 00002        MOVL    OTS$$A_CUR_LUB, CCB               ; 1123
```

```
                                   7E  D4 00009          CLRL     -(SP)                              ; 1124
                             04    AC  DD 0000B          PUSHL    ELEM                               ; 1126
                                   04  DD 0000E          PUSHL    #4                                 ; 1124
                                   08  DD 00010          PUSHL    #8                                 ;
               00000000G  00       04  FB 00012          CALLS    #4, BAS$$UDF_RL1                   ;
                                       04 00019          RET                                         ; 1129

; Routine Size:  26 bytes,    Routine Base:  _BAS$CODE + 0000


;  207          1130  1
;  209        1131  1 GLOBAL ROUTINE BAS$IN_W_R (                            ! input word by ref
;  210        1132  1         ELEM                                           ! element to input by reference
;  211        1133  1     ) : NOVALUE =                                      !
;  212        1134  1
;  213        1135  1 !++
;  214        1136  1 ! FUNCTIONAL DESCRIPTION:
;  215        1137  1 !
;  216        1138  1 ! Input a word, the destination is passed by reference
;  217        1139  1 !
;  218        1140  1 ! FORMAL PARAMETERS:
;  219        1141  1 !
;  220        1142  1 !       ELEM.ww.r               where to store the longword input
;  221        1143  1 !
;  222        1144  1 ! IMPLICIT INPUTS:
;  223        1145  1 !
;  224        1146  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  225        1147  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  226        1148  1 !
;  227        1149  1 ! IMPLICIT OUTPUTS:
;  228        1150  1 !
;  229        1151  1 !       NONE
;  230        1152  1 !
;  231        1153  1 ! COMPLETION CODES:
;  232        1154  1 !
;  233        1155  1 !       NONE
;  234        1156  1 !
;  235        1157  1 ! SIDE EFFECTS:
;  236        1158  1 !
;  237        1159  1 !       NONE
;  238        1160  1 !
;  239        1161  1 !--
;  240        1162  1
;  241        1163  2     BEGIN
;  242        1164  2
;  243        1165  2     GLOBAL REGISTER
;  244        1166  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  245        1167  2
;  246        1168  2     CCB = .OTS$$A_CUR_LUB;
;  247        1169  2     BAS$$UDF_RL1 (DSC$K_DTYPE_W,                       ! data type word
;  248        1170  2         K_WORD_LEN,                                    ! length of data type
;  249        1171  2         .ELEM,                                         ! address of destination
;  250        1172  2         BAS$K_NULL);                                   ! null format character
;  251        1173  2     RETURN;
;  252        1174  1     END;                                               !End of BAS$IN_W_R



                                  0800 00000          .ENTRY  BAS$IN_W_R, Save R11                  ; 1131
              5B 00000000G     00   D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                   ; 1168
                               7E   D4 00009          CLRL    -(SP)                                 ; 1169
                       04      AC   DD 0000B          PUSHL   ELEM                                  ; 1171
                               02   DD 0000E          PUSHL   #2                                    ; 1169
                               07   DD 00010          PUSHL   #7                                    ;
           00000000G  00       04   FB 00012          CALLS   #4, BAS$$UDF_RL1                      ;
                                    04 00019          RET                                           ; 1174
```

```
; Routine Size:  26 bytes,    Routine Base:  _BAS$CODE + 001A

;  253          1175  1
;  255          1176 1 GLOBAL ROUTINE BAS$IN_F_R (                        ! input float by ref
;  256          1177 1         ELEM                                       ! element to input by reference
;  257          1178 1     ) : NOVALUE =                                  !
;  258          1179 1
;  259          1180 1 !++
;  260          1181 1 ! FUNCTIONAL DESCRIPTION:
;  261          1182 1 !
;  262          1183 1 ! Input a single precision floating, the destination is passed by reference
;  263          1184 1 !
;  264          1185 1 ! FORMAL PARAMETERS:
;  265          1186 1 !
;  266          1187 1 !       ELEM.rf.r                 where to store the float input
;  267          1188 1 !
;  268          1189 1 ! IMPLICIT INPUTS:
;  269          1190 1 !
;  270          1191 1 !       OTS$$A_CUR_LUB            current Logical Unit Block
;  271          1192 1 !       ISB$B_STTM_TYPE           statement type of this I/O statement
;  272          1193 1 !
;  273          1194 1 ! IMPLICIT OUTPUTS:
;  274          1195 1 !
;  275          1196 1 !       NONE
;  276          1197 1 !
;  277          1198 1 ! COMPLETION CODES:
;  278          1199 1 !
;  279          1200 1 !       NONE
;  280          1201 1 !
;  281          1202 1 ! SIDE EFFECTS:
;  282          1203 1 !
;  283          1204 1 !       NONE
;  284          1205 1 !
;  285          1206 1 !--
;  286          1207 1
;  287          1208 2     BEGIN
;  288          1209 2
;  289          1210 2     GLOBAL REGISTER
;  290          1211 2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  291          1212 2
;  292          1213 2     CCB = .OTS$$A_CUR_LUB;
;  293          1214 2     BAS$$UDF_RL1 (DSC$K_DTYPE_F,                      ! data type floating
;  294          1215 2         K_FLOAT_LEN,                                  ! length of data type
;  295          1216 2         .ELEM,                                        ! address of destination
;  296          1217 2         BAS$K_NULL);                                  ! null format character
;  297          1218 2     RETURN;
;  298          1219 1     END;                                              !End of BAS$IN_F_R



                                  0800 00000          .ENTRY   BAS$IN_F_R, Save R11                         ; 1176
             5B 00000000G    00     D0 00002          MOVL     OTS$$A_CUR_LUB, CCB                          ; 1213
                             7E     D4 00009          CLRL     -(SP)                                        ; 1214
                       04    AC     DD 0000B          PUSHL    ELEM                                         ; 1216
                             04     DD 0000E          PUSHL    #4                                           ; 1214
                             0A     DD 00010          PUSHL    #10                                          ;
         00000000G  00       04     FB 00012          CALLS    #4, BAS$$UDF_RL1                             ;
                                    04 00019          RET                                                   ; 1219
```

```
; Routine Size:  26 bytes,    Routine Base:  _BAS$CODE + 0034

;  299          1220  1
;   301          1221   1 GLOBAL ROUTINE BAS$IN_D_R (                              ! input double by ref
;   302          1222   1         ELEM                                              ! element to input by reference
;   303          1223   1     ) : NOVALUE =                                         !
;   304          1224   1
;   305          1225   1 !++
;   306          1226   1 ! FUNCTIONAL DESCRIPTION:
;   307          1227   1 !
;   308          1228   1 ! Input a double, the destination is passed by reference
;   309          1229   1 !
;   310          1230   1 ! FORMAL PARAMETERS:
;   311          1231   1 !
;   312          1232   1 !       ELEM.rd.r                 where to store the double input
;   313          1233   1 !
;   314          1234   1 ! IMPLICIT INPUTS:
;   315          1235   1 !
;   316          1236   1 !       OTS$$A_CUR_LUB            current Logical Unit Block
;   317          1237   1 !       ISB$B_STTM_TYPE           statement type of this I/O statement
;   318          1238   1 !
;   319          1239   1 ! IMPLICIT OUTPUTS:
;   320          1240   1 !
;   321          1241   1 !       NONE
;   322          1242   1 !
;   323          1243   1 ! COMPLETION CODES:
;   324          1244   1 !
;   325          1245   1 !       NONE
;   326          1246   1 !
;   327          1247   1 ! SIDE EFFECTS:
;   328          1248   1 !
;   329          1249   1 !       NONE
;   330          1250   1 !
;   331          1251   1 !--
;   332          1252   1
;   333          1253   2     BEGIN
;   334          1254   2
;   335          1255   2     GLOBAL REGISTER
;   336          1256   2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;   337          1257   2
;   338          1258   2     CCB = .OTS$$A_CUR_LUB;
;   339          1259   2     BAS$$UDF_RL1 (DSC$K_DTYPE_D,                          ! data type
;   340          1260   2         K_DOUBLE_LEN,                                     ! length of data type
;   341          1261   2         .ELEM,                                            ! address of destination
;   342          1262   2         BAS$K_NULL);                                      ! null format character
;   343          1263   2     RETURN;
;   344          1264   1     END;                                                  !End of BAS$IN_D_R



                                    0800 00000          .ENTRY  BAS$IN_D_R, Save R11                       ; 1221
               5B 00000000G    00   D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                        ; 1258
                               7E   D4 00009          CLRL    -(SP)                                      ; 1259
                        04     AC   DD 0000B          PUSHL   ELEM                                       ; 1261
                               08   DD 0000E          PUSHL   #8                                         ; 1259
                               0B   DD 00010          PUSHL   #11                                        ;
      00000000G  00            04   FB 00012          CALLS   #4, BAS$$UDF_RL1                           ;
                                    04 00019          RET                                                ; 1264
```

```
; Routine Size:  26 bytes,    Routine Base:  _BAS$CODE + 004E

;  345          1265  1
;  347        1266  1 GLOBAL ROUTINE BAS$IN_T_DX (                   ! input text by desc.
;  348        1267  1         ELEM                                   ! element to input by reference
;  349        1268  1     ) : NOVALUE =                              !
;  350        1269  1
;  351        1270  1 !++
;  352        1271  1 ! FUNCTIONAL DESCRIPTION:
;  353        1272  1 !
;  354        1273  1 ! Input text, the destination is passed by descriptor
;  355        1274  1 !
;  356        1275  1 ! FORMAL PARAMETERS:
;  357        1276  1 !
;  358        1277  1 !       ELEM.rt.dx              where to store the text input
;  359        1278  1 !
;  360        1279  1 ! IMPLICIT INPUTS:
;  361        1280  1 !
;  362        1281  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  363        1282  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  364        1283  1 !
;  365        1284  1 ! IMPLICIT OUTPUTS:
;  366        1285  1 !
;  367        1286  1 !       NONE
;  368        1287  1 !
;  369        1288  1 ! COMPLETION CODES:
;  370        1289  1 !
;  371        1290  1 !       NONE
;  372        1291  1 !
;  373        1292  1 ! SIDE EFFECTS:
;  374        1293  1 !
;  375        1294  1 !       NONE
;  376        1295  1 !
;  377        1296  1 !--
;  378        1297  1
;  379        1298  2     BEGIN
;  380        1299  2
;  381        1300  2     GLOBAL REGISTER
;  382        1301  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  383        1302  2
;  384        1303  2     MAP
;  385        1304  2         ELEM : REF BLOCK [8, BYTE];
;  386        1305  2
;  387        1306  2     CCB = .OTS$$A_CUR_LUB;
;  388        1307  2     BAS$$UDF_RL1 (DSC$K_DTYPE_T,                  ! data type
;  389        1308  2         ELEM [DSC$W_LENGTH],                      ! string length
;  390        1309  2         .ELEM,                                    ! address of descriptor
;  391        1310  2         BAS$K_NULL);                              ! null format character
;  392        1311  2     RETURN;
;  393        1312  1     END;                                          !End of BAS$IN_T_DX



                                  0800 00000        .ENTRY  BAS$IN_T_DX, Save R11                     ; 1266
                  5B 00000000G  00  D0 00002        MOVL    OTS$$A_CUR_LUB, CCB                       ; 1306
                                7E  D4 00009        CLRL    -(SP)                                     ; 1308
                          04    AC  DD 0000B        PUSHL   ELEM                                      ; 1309
                          04    AC  DD 0000E        PUSHL   ELEM                                      ; 1308
```

```
                                        0E  DD 00011        PUSHL   #14                          ;
                     00000000G  00      04  FB 00013        CALLS   #4, BAS$$UDF_RL1             ;
                                            04 0001A        RET                                  ; 1312

; Routine Size:  27 bytes,    Routine Base:  _BAS$CODE + 0068


;  394          1313  1
;  396     1314  1 GLOBAL ROUTINE BAS$OUT_L_V_S (                      ! print longword by value, semi format character
;  397     1315  1         ELEM                                        ! element to print by value
;  398     1316  1     ) : NOVALUE =                                   !
;  399     1317  1
;  400     1318  1 !++
;  401     1319  1 ! FUNCTIONAL DESCRIPTION:
;  402     1320  1 !
;  403     1321  1 ! Output a longword, the source is passed by value
;  404     1322  1 !
;  405     1323  1 ! FORMAL PARAMETERS:
;  406     1324  1 !
;  407     1325  1 !       ELEM.rl.v               longword to print
;  408     1326  1 !
;  409     1327  1 ! IMPLICIT INPUTS:
;  410     1328  1 !
;  411     1329  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  412     1330  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  413     1331  1 !
;  414     1332  1 ! IMPLICIT OUTPUTS:
;  415     1333  1 !
;  416     1334  1 !       NONE
;  417     1335  1 !
;  418     1336  1 ! COMPLETION CODES:
;  419     1337  1 !
;  420     1338  1 !       NONE
;  421     1339  1 !
;  422     1340  1 ! SIDE EFFECTS:
;  423     1341  1 !
;  424     1342  1 !       NONE
;  425     1343  1 !
;  426     1344  1 !--
;  427     1345  1
;  428     1346  2     BEGIN
;  429     1347  2
;  430     1348  2     GLOBAL REGISTER
;  431     1349  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  432     1350  2
;  433     1351  2     CCB = .OTS$$A_CUR_LUB;
;  434     1352  2 !+
;  435     1353  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  436     1354  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  437     1355  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  438     1356  2 !-
;  439     1357  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_L,
;  440     1358  2                                                     ! data type
;  441     1359  2         K_LONG_LEN,                                 ! length of data type
;  442     1360  2         ELEM,                                       ! address of value
;  443     1361  2         BAS$K_SEMI_FORM                             ! semicolon format character
;  444     1362  2     );
;  445     1363  2     RETURN;
;  446     1364  1     END;                                            !End of BAS$OUT_L_V_S



                                        0800 00000        .ENTRY  BAS$OUT_L_V_S, Save R11                       ; 1314
```

```
                    5B 00000000G  00  D0 00002        MOVL    OTS$$A_CUR_LUB, CCB                              ; 1351
                    50      FF71  CB  9A 00009        MOVZBL  -143(CCB), R0                                   ; 1357
                    50 00000000G0040  D0 0000E        MOVL    BAS$$AA_UDF_PR1-104[R0], R0                       ;
                                  01  DD 00016        PUSHL   #1                                               ;
                            04    AC  9F 00018        PUSHAB  ELEM                                             ;
                                  04  DD 0001B        PUSHL   #4                                               ;
                                  08  DD 0001D        PUSHL   #8                                               ;
            00000000G0040         04  FB 0001F        CALLS   #4, BAS$$AA_UDF_PR1[R0]                           ;
                                      04 00027        RET                                                      ; 1364

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 0083


;  447         1365  1
;  449     1366  1 GLOBAL ROUTINE BAS$OUT_L_V_C (                        ! print a longword by value, comma format character
;  450     1367  1         ELEM                                          ! element to output by value
;  451     1368  1     ) : NOVALUE =                                     !
;  452     1369  1
;  453     1370  1 !++
;  454     1371  1 ! FUNCTIONAL DESCRIPTION:
;  455     1372  1 !
;  456     1373  1 ! Output a longword, the source is passed by value
;  457     1374  1 !
;  458     1375  1 ! FORMAL PARAMETERS:
;  459     1376  1 !
;  460     1377  1 !       ELEM.rl.v                 longword to print
;  461     1378  1 !
;  462     1379  1 ! IMPLICIT INPUTS:
;  463     1380  1 !
;  464     1381  1 !       OTS$$A_CUR_LUB            current Logical Unit Block
;  465     1382  1 !       ISB$B_STTM_TYPE           statement type of this I/O statement
;  466     1383  1 !
;  467     1384  1 ! IMPLICIT OUTPUTS:
;  468     1385  1 !
;  469     1386  1 !       NONE
;  470     1387  1 !
;  471     1388  1 ! COMPLETION CODES:
;  472     1389  1 !
;  473     1390  1 !       NONE
;  474     1391  1 !
;  475     1392  1 ! SIDE EFFECTS:
;  476     1393  1 !
;  477     1394  1 !       NONE
;  478     1395  1 !
;  479     1396  1 !--
;  480     1397  1
;  481     1398  2     BEGIN
;  482     1399  2
;  483     1400  2     GLOBAL REGISTER
;  484     1401  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  485     1402  2
;  486     1403  2     CCB = .OTS$$A_CUR_LUB;
;  487     1404  2 !+
;  488     1405  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  489     1406  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  490     1407  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  491     1408  2 !-
;  492     1409  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_L,
;  493     1410  2                                                       ! data type
;  494     1411  2         K_LONG_LEN,                                   ! length of data type
;  495     1412  2         ELEM,                                         ! address of value
;  496     1413  2         BAS$K_COMMA_FOR                               ! comma format character
;  497     1414  2     );
;  498     1415  2     RETURN;
;  499     1416  1     END;                                              !End of BAS$OUT_L_V_C



                                        0800 00000      .ENTRY  BAS$OUT_L_V_C, Save R11                   ; 1366
```

```
                              5B 00000000G  00  D0 00002     MOVL     OTS$$A_CUR_LUB, CCB                    ; 1403
                              50       FF71  CB  9A 00009     MOVZBL   -143(CCB), R0                          ; 1409
                              50 00000000G0040  D0 0000E     MOVL     BAS$$AA_UDF_PR1-104[R0], R0            ;
                                            02  DD 00016     PUSHL    #2                                     ;
                                      04    AC  9F 00018     PUSHAB   ELEM                                   ;
                                            04  DD 0001B     PUSHL    #4                                     ;
                                            08  DD 0001D     PUSHL    #8                                     ;
                  00000000G0040             04  FB 0001F     CALLS    #4, BAS$$AA_UDF_PR1[R0]                ;
                                                04 00027     RET                                             ; 1416

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 00AB


;  500          1417  1
;  502      1418 1 GLOBAL ROUTINE BAS$OUT_L_V_B (                    ! print longword by value, no format character
;  503      1419 1         ELEM                                      ! element to output by value
;  504      1420 1     ) : NOVALUE =                                 !
;  505      1421 1
;  506      1422 1 !++
;  507      1423 1 ! FUNCTIONAL DESCRIPTION:
;  508      1424 1 !
;  509      1425 1 ! Output a longword, the source is passed by value
;  510      1426 1 !
;  511      1427 1 ! FORMAL PARAMETERS:
;  512      1428 1 !
;  513      1429 1 !       ELEM.rl.v               longword to print
;  514      1430 1 !
;  515      1431 1 ! IMPLICIT INPUTS:
;  516      1432 1 !
;  517      1433 1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  518      1434 1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  519      1435 1 !
;  520      1436 1 ! IMPLICIT OUTPUTS:
;  521      1437 1 !
;  522      1438 1 !       NONE
;  523      1439 1 !
;  524      1440 1 ! COMPLETION CODES:
;  525      1441 1 !
;  526      1442 1 !       NONE
;  527      1443 1 !
;  528      1444 1 ! SIDE EFFECTS:
;  529      1445 1 !
;  530      1446 1 !       NONE
;  531      1447 1 !
;  532      1448 1 !--
;  533      1449 1
;  534      1450 2     BEGIN
;  535      1451 2
;  536      1452 2     GLOBAL REGISTER
;  537      1453 2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  538      1454 2
;  539      1455 2     CCB = .OTS$$A_CUR_LUB;
;  540      1456 2 !+
;  541      1457 2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  542      1458 2 ! element transmit for prompting or for printing.  Therefore, based on the
;  543      1459 2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  544      1460 2 !-
;  545      1461 2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_L,
;  546      1462 2                                                   ! data type
;  547      1463 2         K_LONG_LEN,                               ! length of data type
;  548      1464 2         ELEM,                                     ! address of value
;  549      1465 2         BAS$K_NO_FORM                             ! no format character
;  550      1466 2     );
;  551      1467 2     RETURN;
;  552      1468 1     END;                                          !End of BAS$OUT_L_V_B



                                 0800 00000      .ENTRY  BAS$OUT_L_V_B, Save R11                     ; 1418
```

```
                     5B 00000000G  00  D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                       ; 1455
                     50      FF71  CB  9A 00009          MOVZBL  -143(CCB), R0                             ; 1461
                     50 00000000G0040  D0 0000E          MOVL    BAS$$AA_UDF_PR1-104[R0], R0               ;
                                   03  DD 00016          PUSHL   #3                                        ;
                               04  AC  9F 00018          PUSHAB  ELEM                                      ;
                                   04  DD 0001B          PUSHL   #4                                        ;
                                   08  DD 0001D          PUSHL   #8                                        ;
             00000000G0040         04  FB 0001F          CALLS   #4, BAS$$AA_UDF_PR1[R0]                   ;
                                       04 00027          RET                                               ; 1468

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 00D3


;  553          1469  1
;  555        1470  1 GLOBAL ROUTINE BAS$OUT_F_V_S (                        ! print floating by value, semicolon format
;  556        1471  1         ELEM                                           ! element to output by value
;  557        1472  1     ) : NOVALUE =                                      !
;  558        1473  1
;  559        1474  1 !++
;  560        1475  1 ! FUNCTIONAL DESCRIPTION:
;  561        1476  1 !
;  562        1477  1 ! Output a single precision floating, the source is passed by value
;  563        1478  1 !
;  564        1479  1 ! FORMAL PARAMETERS:
;  565        1480  1 !
;  566        1481  1 !       ELEM.rf.v                floating to print
;  567        1482  1 !
;  568        1483  1 ! IMPLICIT INPUTS:
;  569        1484  1 !
;  570        1485  1 !       OTS$$A_CUR_LUB           current Logical Unit Block
;  571        1486  1 !       ISB$B_STTM_TYPE          statement type of this I/O statement
;  572        1487  1 !
;  573        1488  1 ! IMPLICIT OUTPUTS:
;  574        1489  1 !
;  575        1490  1 !       NONE
;  576        1491  1 !
;  577        1492  1 ! COMPLETION CODES:
;  578        1493  1 !
;  579        1494  1 !       NONE
;  580        1495  1 !
;  581        1496  1 ! SIDE EFFECTS:
;  582        1497  1 !
;  583        1498  1 !       NONE
;  584        1499  1 !
;  585        1500  1 !--
;  586        1501  1
;  587        1502  2     BEGIN
;  588        1503  2
;  589        1504  2     GLOBAL REGISTER
;  590        1505  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  591        1506  2
;  592        1507  2     CCB = .OTS$$A_CUR_LUB;
;  593        1508  2 !+
;  594        1509  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  595        1510  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  596        1511  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  597        1512  2 !-
;  598        1513  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_F,
;  599        1514  2                                                    ! data type
;  600        1515  2         K_FLOAT_LEN,                               ! length of data type
;  601        1516  2         ELEM,                                      ! address of value
;  602        1517  2         BAS$K_SEMI_FORM                            ! semicolon format character
;  603        1518  2     );
;  604        1519  2     RETURN;
;  605        1520  1     END;                                           !End of BAS$OUT_F_V_S



                                          0800 00000       .ENTRY  BAS$OUT_F_V_S, Save R11                          ; 1470
```

```
                     5B 00000000G  00  D0 00002        MOVL    OTS$$A_CUR_LUB, CCB                    ; 1507
                     50      FF71  CB  9A 00009        MOVZBL  -143(CCB), R0                          ; 1513
                     50 00000000G0040  D0 0000E        MOVL    BAS$$AA_UDF_PR1-104[R0], R0            ;
                                   01  DD 00016        PUSHL   #1                                     ;
                               04  AC  9F 00018        PUSHAB  ELEM                                   ;
                                   04  DD 0001B        PUSHL   #4                                     ;
                                   0A  DD 0001D        PUSHL   #10                                    ;
            00000000G0040          04  FB 0001F        CALLS   #4, BAS$$AA_UDF_PR1[R0]                ;
                                       04 00027        RET                                            ; 1520

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 00FB


;  606          1521  1
;  608        1522  1 GLOBAL ROUTINE BAS$OUT_F_V_C (                       ! print floating by value, comma format
;  609        1523  1         ELEM                                         ! element to output by value
;  610        1524  1     ) : NOVALUE =                                    !
;  611        1525  1
;  612        1526  1 !++
;  613        1527  1 ! FUNCTIONAL DESCRIPTION:
;  614        1528  1 !
;  615        1529  1 ! Output a single precision floating, the source is passed by value
;  616        1530  1 !
;  617        1531  1 ! FORMAL PARAMETERS:
;  618        1532  1 !
;  619        1533  1 !       ELEM.rf.v               floating to print
;  620        1534  1 !
;  621        1535  1 ! IMPLICIT INPUTS:
;  622        1536  1 !
;  623        1537  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  624        1538  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  625        1539  1 !
;  626        1540  1 ! IMPLICIT OUTPUTS:
;  627        1541  1 !
;  628        1542  1 !       NONE
;  629        1543  1 !
;  630        1544  1 ! COMPLETION CODES:
;  631        1545  1 !
;  632        1546  1 !       NONE
;  633        1547  1 !
;  634        1548  1 ! SIDE EFFECTS:
;  635        1549  1 !
;  636        1550  1 !       NONE
;  637        1551  1 !
;  638        1552  1 !--
;  639        1553  1
;  640        1554  2     BEGIN
;  641        1555  2
;  642        1556  2     GLOBAL REGISTER
;  643        1557  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  644        1558  2
;  645        1559  2     CCB = .OTS$$A_CUR_LUB;
;  646        1560  2 !+
;  647        1561  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  648        1562  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  649        1563  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  650        1564  2 !-
;  651        1565  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_F,
;  652        1566  2                                                      ! data type
;  653        1567  2         K_FLOAT_LEN,                                 ! length of data type
;  654        1568  2         ELEM,                                        ! address of value
;  655        1569  2         BAS$K_COMMA_FOR                              ! comma format character
;  656        1570  2     );
;  657        1571  2     RETURN;
;  658        1572  1     END;                                             !End of BAS$OUT_F_V_C


                                 0800 00000         .ENTRY  BAS$OUT_F_V_C, Save R11                           ; 1522
```

```
                          5B 00000000G  00  D0 00002        MOVL    OTS$$A_CUR_LUB, CCB                           ; 1559
                          50      FF71  CB  9A 00009        MOVZBL  -143(CCB), R0                                 ; 1565
                          50 00000000G0040  D0 0000E        MOVL    BAS$$AA_UDF_PR1-104[R0], R0                   ;
                                        02  DD 00016        PUSHL   #2                                            ;
                                   04   AC  9F 00018        PUSHAB  ELEM                                          ;
                                        04  DD 0001B        PUSHL   #4                                            ;
                                        0A  DD 0001D        PUSHL   #10                                           ;
                 00000000G0040          04  FB 0001F        CALLS   #4, BAS$$AA_UDF_PR1[R0]                       ;
                                            04 00027        RET                                                   ; 1572

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 0123


;  659          1573  1
;  661      1574  1 GLOBAL ROUTINE BAS$OUT_F_V_B (                        ! print floating by value, no format
;  662      1575  1         ELEM                                          ! element to output by value
;  663      1576  1     ) : NOVALUE =                                     !
;  664      1577  1
;  665      1578  1 !++
;  666      1579  1 ! FUNCTIONAL DESCRIPTION:
;  667      1580  1 !
;  668      1581  1 ! Output a single precision floating, the source is passed by value
;  669      1582  1 !
;  670      1583  1 ! FORMAL PARAMETERS:
;  671      1584  1 !
;  672      1585  1 !       ELEM.rf.v               floating to print
;  673      1586  1 !
;  674      1587  1 ! IMPLICIT INPUTS:
;  675      1588  1 !
;  676      1589  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  677      1590  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  678      1591  1 !
;  679      1592  1 ! IMPLICIT OUTPUTS:
;  680      1593  1 !
;  681      1594  1 !       NONE
;  682      1595  1 !
;  683      1596  1 ! COMPLETION CODES:
;  684      1597  1 !
;  685      1598  1 !       NONE
;  686      1599  1 !
;  687      1600  1 ! SIDE EFFECTS:
;  688      1601  1 !
;  689      1602  1 !       NONE
;  690      1603  1 !
;  691      1604  1 !--
;  692      1605  1
;  693      1606  2     BEGIN
;  694      1607  2
;  695      1608  2     GLOBAL REGISTER
;  696      1609  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  697      1610  2
;  698      1611  2     CCB = .OTS$$A_CUR_LUB;
;  699      1612  2 !+
;  700      1613  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  701      1614  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  702      1615  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  703      1616  2 !-
;  704      1617  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_F,
;  705      1618  2                                                       ! data type
;  706      1619  2         K_FLOAT_LEN,                                  ! length of data type
;  707      1620  2         E[EM,                                         ! address of value
;  708      1621  2         BAS$K_NO_FORM                                 ! no format character
;  709      1622  2     );
;  710      1623  2     RETURN;
;  711      1624  1     END;                                              !End of BAS$OUT_F_V_B



                                    0800 00000       .ENTRY  BAS$OUT_F_V_B, Save R11                        ; 1574
```

```
                         5B 00000000G  00   D0 00002          MOVL     OTS$$A_CUR_LUB, CCB                      ; 1611
                         50      FF71  CB   9A 00009          MOVZBL   -143(CCB), R0                            ; 1617
                         50 00000000G0040   D0 0000E          MOVL     BAS$$AA_UDF_PR1-104[R0], R0              ;
                                       03   DD 00016          PUSHL    #3                                       ;
                                  04   AC   9F 00018          PUSHAB   ELEM                                     ;
                                       04   DD 0001B          PUSHL    #4                                       ;
                                       0A   DD 0001D          PUSHL    #10                                      ;
                  00000000G0040        04   FB 0001F          CALLS    #4, BAS$$AA_UDF_PR1[R0]                  ;
                                            04 00027          RET                                               ; 1624

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 014B


;  712          1625  1
;  714          1626 1 GLOBAL ROUTINE BAS$OUT_D_V_S (                   ! print double by value, semicolon format
;  715          1627 1         ELEM                                      ! element to output by value
;  716          1628 1     ) : NOVALUE =                                 !
;  717          1629 1
;  718          1630 1 !++
;  719          1631 1 ! FUNCTIONAL DESCRIPTION:
;  720          1632 1 !
;  721          1633 1 ! Output a double precision floating, the source is passed by value
;  722          1634 1 !
;  723          1635 1 ! FORMAL PARAMETERS:
;  724          1636 1 !
;  725          1637 1 !       ELEM.rd.v               double floating to print
;  726          1638 1 !
;  727          1639 1 ! IMPLICIT INPUTS:
;  728          1640 1 !
;  729          1641 1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  730          1642 1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  731          1643 1 !
;  732          1644 1 ! IMPLICIT OUTPUTS:
;  733          1645 1 !
;  734          1646 1 !       NONE
;  735          1647 1 !
;  736          1648 1 ! COMPLETION CODES:
;  737          1649 1 !
;  738          1650 1 !       NONE
;  739          1651 1 !
;  740          1652 1 ! SIDE EFFECTS:
;  741          1653 1 !
;  742          1654 1 !       NONE
;  743          1655 1 !
;  744          1656 1 !--
;  745          1657 1
;  746          1658 2     BEGIN
;  747          1659 2
;  748          1660 2     GLOBAL REGISTER
;  749          1661 2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  750          1662 2
;  751          1663 2     CCB = .OTS$$A_CUR_LUB;
;  752          1664 2 !+
;  753          1665 2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  754          1666 2 ! element transmit for prompting or for printing.  Therefore, based on the
;  755          1667 2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  756          1668 2 !-
;  757          1669 2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_D,
;  758          1670 2                                                   ! data type
;  759          1671 2         K_DOUBLE_LEN,                             ! length of data type
;  760          1672 2         ELEM,                                     ! address of value
;  761          1673 2         BAS$K_SEMI_FORM                           ! semicolon format character
;  762          1674 2     );
;  763          1675 2     RETURN;
;  764          1676 1     END;                                          !End of BAS$OUT_D_V_S



                                 0800 00000        .ENTRY  BAS$OUT_D_V_S, Save R11                    ; 1626
```

```
                        5B 00000000G  00  D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                         ; 1663
                        50       FF71  CB  9A 00009          MOVZBL  -143(CCB), R0                               ; 1669
                        50 00000000G0040  D0 0000E          MOVL    BAS$$AA_UDF_PR1-104[R0], R0                 ;
                                       01  DD 00016          PUSHL   #1                                          ;
                              04       AC  9F 00018          PUSHAB  ELEM                                        ;
                                       08  DD 0001B          PUSHL   #8                                          ;
                                       0B  DD 0001D          PUSHL   #11                                         ;
                  00000000G0040        04  FB 0001F          CALLS   #4, BAS$$AA_UDF_PR1[R0]                     ;
                                           04 00027          RET                                                 ; 1676

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 0173


;  765          1677  1
;  767        1678  1 GLOBAL ROUTINE BAS$OUT_D_V_C (                    ! print double by value, comma format
;  768        1679  1        ELEM                                       ! element to output by value
;  769        1680  1     ) : NOVALUE =                                 !
;  770        1681  1
;  771        1682  1 !++
;  772        1683  1 ! FUNCTIONAL DESCRIPTION:
;  773        1684  1 !
;  774        1685  1 ! Output a double precision floating, the source is passed by value
;  775        1686  1 !
;  776        1687  1 ! FORMAL PARAMETERS:
;  777        1688  1 !
;  778        1689  1 !      ELEM.rd.v                 double floating to print
;  779        1690  1 !
;  780        1691  1 ! IMPLICIT INPUTS:
;  781        1692  1 !
;  782        1693  1 !      OTS$$A_CUR_LUB            current Logical Unit Block
;  783        1694  1 !      ISB$B_STTM_TYPE           statement type of this I/O statement
;  784        1695  1 !
;  785        1696  1 ! IMPLICIT OUTPUTS:
;  786        1697  1 !
;  787        1698  1 !      NONE
;  788        1699  1 !
;  789        1700  1 ! COMPLETION CODES:
;  790        1701  1 !
;  791        1702  1 !      NONE
;  792        1703  1 !
;  793        1704  1 ! SIDE EFFECTS:
;  794        1705  1 !
;  795        1706  1 !      NONE
;  796        1707  1 !
;  797        1708  1 !--
;  798        1709  1
;  799        1710  2    BEGIN
;  800        1711  2
;  801        1712  2    GLOBAL REGISTER
;  802        1713  2        CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  803        1714  2
;  804        1715  2    CCB = .OTS$$A_CUR_LUB;
;  805        1716  2 !+
;  806        1717  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  807        1718  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  808        1719  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  809        1720  2 !-
;  810        1721  2    (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_D,
;  811        1722  2                                                  ! data type
;  812        1723  2        K_DOUBLE_LEN,                             ! length of data type
;  813        1724  2        ELEM,                                     ! address of value
;  814        1725  2        BAS$K_COMMA_FOR                           ! comma format character
;  815        1726  2    );
;  816        1727  2    RETURN;
;  817        1728  1    END;                                          !End of BAS$OUT_D_V_C



                                 0800 00000        .ENTRY  BAS$OUT_D_V_C, Save R11                      ; 1678
```

```
                       5B 00000000G  00  D0 00002         MOVL    OTS$$A_CUR_LUB, CCB                         ; 1715
                       50       FF71  CB  9A 00009         MOVZBL  -143(CCB), R0                               ; 1721
                       50 00000000G0040  D0 0000E         MOVL    BAS$$AA_UDF_PR1-104[R0], R0                 ;
                                     02  DD 00016         PUSHL   #2                                          ;
                                04   AC  9F 00018         PUSHAB  ELEM                                        ;
                                     08  DD 0001B         PUSHL   #8                                          ;
                                     0B  DD 0001D         PUSHL   #11                                         ;
                00000000G0040       04  FB 0001F         CALLS   #4, BAS$$AA_UDF_PR1[R0]                     ;
                                         04 00027         RET                                                 ; 1728

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 019B


;  818          1729  1
;  820          1730  1 GLOBAL ROUTINE BAS$OUT_D_V_B (                   ! print double by value, no format
;  821          1731  1         ELEM                                     ! element to output by value
;  822          1732  1     ) : NOVALUE =                                !
;  823          1733  1
;  824          1734  1 !++
;  825          1735  1 ! FUNCTIONAL DESCRIPTION:
;  826          1736  1 !
;  827          1737  1 ! Output a double precision floating, the source is passed by value
;  828          1738  1 !
;  829          1739  1 ! FORMAL PARAMETERS:
;  830          1740  1 !
;  831          1741  1 !       ELEM.rd.v               double floating to print
;  832          1742  1 !
;  833          1743  1 ! IMPLICIT INPUTS:
;  834          1744  1 !
;  835          1745  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  836          1746  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  837          1747  1 !
;  838          1748  1 ! IMPLICIT OUTPUTS:
;  839          1749  1 !
;  840          1750  1 !       NONE
;  841          1751  1 !
;  842          1752  1 ! COMPLETION CODES:
;  843          1753  1 !
;  844          1754  1 !       NONE
;  845          1755  1 !
;  846          1756  1 ! SIDE EFFECTS:
;  847          1757  1 !
;  848          1758  1 !       NONE
;  849          1759  1 !
;  850          1760  1 !--
;  851          1761  1
;  852          1762  2     BEGIN
;  853          1763  2
;  854          1764  2     GLOBAL REGISTER
;  855          1765  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  856          1766  2
;  857          1767  2     CCB = .OTS$$A_CUR_LUB;
;  858          1768  2 !+
;  859          1769  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  860          1770  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  861          1771  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  862          1772  2 !-
;  863          1773  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_D,
;  864          1774  2                                                  ! data type
;  865          1775  2         K_DOUBLE_LEN,                            ! length of data type
;  866          1776  2         ELEM,                                    ! address of value
;  867          1777  2         BAS$K_NO_FORM                            ! no format character
;  868          1778  2     );
;  869          1779  2     RETURN;
;  870          1780  1     END;                                         !End of BAS$OUT_D_V_B



                                         0800 00000        .ENTRY  BAS$OUT_D_V_B, Save R11                          ; 1730
```

```
                                       5B 00000000G  00  D0 00002         MOVL    OTS$$A_CUR_LUB, CCB                         ; 1767
                                       50     FF71   CB  9A 00009         MOVZBL  -143(CCB), R0                               ; 1773
                                       50 00000000G0040  D0 0000E         MOVL    BAS$$AA_UDF_PR1-104[R0], R0                 ;
                                                     03  DD 00016         PUSHL   #3                                          ;
                                                04   AC  9F 00018         PUSHAB  ELEM                                        ;
                                                     08  DD 0001B         PUSHL   #8                                          ;
                                                     0B  DD 0001D         PUSHL   #11                                         ;
                            00000000G0040            04  FB 0001F         CALLS   #4, BAS$$AA_UDF_PR1[R0]                     ;
                                                         04 00027         RET                                                 ; 1780

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 01C3


;  871          1781  1
;  1 GLOBAL ROUTINE BAS$OUT_T_DX_S (                             ! print text by desc., semicolon format
;  1         ELEM                                                ! element to output by descriptor
;  1     ) : NOVALUE =                                           !
;  1
;  1 !++
;  1 ! FUNCTIONAL DESCRIPTION:
;  1 !
;  1 ! Output text, the source is passed by descriptor
;  1 !
;  1 ! FORMAL PARAMETERS:
;  1 !
;  1 !       ELEM.rt.dx              text to print
;  1 !
;  1 ! IMPLICIT INPUTS:
;  1 !
;  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  1 !
;  1 ! IMPLICIT OUTPUTS:
;  1 !
;  1 !       NONE
;  1 !
;  1 ! COMPLETION CODES:
;  1 !
;  1 !       NONE
;  1 !
;  1 ! SIDE EFFECTS:
;  1 !
;  1 !       NONE
;  1 !
;  1 !--
;  1
;  2     BEGIN
;  2
;  2     GLOBAL REGISTER
;  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  2
;  2     MAP
;  2         ELEM : REF BLOCK [8, BYTE];
;  2
;  2     CCB = .OTS$$A_CUR_LUB;
;  2 !+
;  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  2 !-
;  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_T,
;  2                                                             ! data type
;  2         .ELEM [DSC$W_LENGTH],                               ! length of data
;  2         .ELEM,                                              ! address of desc
;  2         BAS$K_SEMI_FORM                                     ! semicolon format character
;  2     );
;  2     RETURN;
;  1     END;                                                    !End of BAS$OUT_T_DX_S
```

```
                              0800 00000          .ENTRY  BAS$OUT_T_DX_S, Save R11                          ; 1782
          5B 00000000G  00  D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                              ; 1822
          50      FF71  CB  9A 00009          MOVZBL  -143(CCB), R0                                    ; 1828
          50 00000000G0040  D0 0000E          MOVL    BAS$$AA_UDF_PR1-104[R0], R0                      ;
                        01  DD 00016          PUSHL   #1                                               ;
                  04    AC  DD 00018          PUSHL   ELEM                                             ; 1831
          7E      04    BC  3C 0001B          MOVZWL  @ELEM, -(SP)                                     ; 1830
                        0E  DD 0001F          PUSHL   #14                                              ; 1828
 00000000G0040          04  FB 00021          CALLS   #4, BAS$$AA_UDF_PR1[R0]                          ;
                            04 00029          RET                                                      ; 1835

; Routine Size:  42 bytes,    Routine Base:  _BAS$CODE + 01EB


;  927          1836  1
;  929       1837  1 GLOBAL ROUTINE BAS$OUT_T_DX_C (                 ! print text by desc., comma format
;  930       1838  1         ELEM                                    ! element to output by descriptor
;  931       1839  1     ) : NOVALUE =                               !
;  932       1840  1
;  933       1841  1 !++
;  934       1842  1 ! FUNCTIONAL DESCRIPTION:
;  935       1843  1 !
;  936       1844  1 ! Output text, the source is passed by descriptor
;  937       1845  1 !
;  938       1846  1 ! FORMAL PARAMETERS:
;  939       1847  1 !
;  940       1848  1 !       ELEM.rt.dx              text to print
;  941       1849  1 !
;  942       1850  1 ! IMPLICIT INPUTS:
;  943       1851  1 !
;  944       1852  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
;  945       1853  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
;  946       1854  1 !
;  947       1855  1 ! IMPLICIT OUTPUTS:
;  948       1856  1 !
;  949       1857  1 !       NONE
;  950       1858  1 !
;  951       1859  1 ! COMPLETION CODES:
;  952       1860  1 !
;  953       1861  1 !       NONE
;  954       1862  1 !
;  955       1863  1 ! SIDE EFFECTS:
;  956       1864  1 !
;  957       1865  1 !       NONE
;  958       1866  1 !
;  959       1867  1 !--
;  960       1868  1
;  961       1869  2     BEGIN
;  962       1870  2
;  963       1871  2     GLOBAL REGISTER
;  964       1872  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
;  965       1873  2
;  966       1874  2     MAP
;  967       1875  2         ELEM : REF BLOCK [8, BYTE];
;  968       1876  2
;  969       1877  2     CCB = .OTS$$A_CUR_LUB;
;  970       1878  2 !+
;  971       1879  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
;  972       1880  2 ! element transmit for prompting or for printing.  Therefore, based on the
;  973       1881  2 ! statement type, either the INPUT or the PRINT UDF will be called.
;  974       1882  2 !-
;  975       1883  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_T,
;  976       1884  2                                                 ! data type
;  977       1885  2         .ELEM [DSC$W_LENGTH],                   ! length of data
;  978       1886  2         .ELEM,                                  ! address of desc
;  979       1887  2         BAS$K_COMMA_FOR                         ! comma format character
;  980       1888  2     );
;  981       1889  2     RETURN;
;  982       1890  1     END;                                        !End of BAS$OUT_T_DX_C
```

```
                                     0800 00000         .ENTRY  BAS$OUT_T_DX_C, Save R11                      ; 1837
                 5B 00000000G   00    D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                           ; 1877
                 50      FF71   CB    9A 00009          MOVZBL  -143(CCB), R0                                 ; 1883
                 50 00000000G0040     D0 0000E          MOVL    BAS$$AA_UDF_PR1-104[R0], R0                   ;
                                02    DD 00016          PUSHL   #2                                            ;
                          04    AC    DD 00018          PUSHL   ELEM                                          ; 1886
                 7E       04    BC    3C 0001B          MOVZWL  @ELEM, -(SP)                                  ; 1885
                                0E    DD 0001F          PUSHL   #14                                           ; 1883
          00000000G0040         04    FB 00021          CALLS   #4, BAS$$AA_UDF_PR1[R0]                       ;
                                      04 00029          RET                                                   ; 1890

; Routine Size:  42 bytes,    Routine Base:  _BAS$CODE + 0215


;  983          1891  1
```

```
1 GLOBAL ROUTINE BAS$OUT_T_DX_B (                 ! print text by desc., no format
1         ELEM                                    ! element to output by descriptor
1     ) : NOVALUE =                               !
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 ! Output text, the source is passed by descriptor
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       ELEM.rt.dx              text to print
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       OTS$$A_CUR_LUB          current Logical Unit Block
1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION CODES:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       NONE
1 !
1 !--
1
2     BEGIN
2
2     GLOBAL REGISTER
2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
2
2     MAP
2         ELEM : REF BLOCK [8, BYTE];
2
2     CCB = .OTS$$A_CUR_LUB;
2 !+
2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
2 ! element transmit for prompting or for printing.  Therefore, based on the
2 ! statement type, either the INPUT or the PRINT UDF will be called.
2 !-
2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_T,
2                                                 ! data type
2         .ELEM [DSC$W_LENGTH],                   ! length of data
2         .ELEM,                                  ! address of desc
2         BAS$K_NO_FORM                           ! no format character
2     );
2     RETURN;
1     END;                                        !End of BAS$OUT_T_DX_B
```

```
                              0800 00000        .ENTRY  BAS$OUT_T_DX_B, Save R11                            ; 1892
         5B 00000000G   00      D0 00002        MOVL    OTS$$A_CUR_LUB, CCB                                 ; 1932
         50       FF71  CB      9A 00009        MOVZBL  -143(CCB), R0                                       ; 1938
         50 00000000G0040       D0 0000E        MOVL    BAS$$AA_UDF_PR1-104[R0], R0                         ;
                          03    DD 00016        PUSHL   #3                                                  ;
                    04    AC    DD 00018        PUSHL   ELEM                                                ; 1941
         7E         04    BC    3C 0001B        MOVZWL  @ELEM, -(SP)                                        ; 1940
                          0E    DD 0001F        PUSHL   #14                                                 ; 1938
    00000000G0040         04    FB 00021        CALLS   #4, BAS$$AA_UDF_PR1[R0]                             ;
                                04 00029        RET                                                         ; 1945

; Routine Size:  42 bytes,    Routine Base:  _BAS$CODE + 023F
; 1040        1946  1 GLOBAL ROUTINE BAS$OUT_G_V_S (                        ! output G by value, semi format
; 1041        1947  1         ELEM                                          ! element to output
; 1042        1948  1     ) : NOVALUE =                                     !
; 1043        1949  1
; 1044        1950  1 !++
; 1045        1951  1 ! FUNCTIONAL DESCRIPTION:
; 1046        1952  1 !
; 1047        1953  1 ! Output a g floating number passed by value, with a semi colon terminator
; 1048        1954  1 !
; 1049        1955  1 ! FORMAL PARAMETERS:
; 1050        1956  1 !
; 1051        1957  1 !       ELEM.rg.v               g float to print
; 1052        1958  1 !
; 1053        1959  1 ! IMPLICIT INPUTS:
; 1054        1960  1 !
; 1055        1961  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
; 1056        1962  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
; 1057        1963  1 !
; 1058        1964  1 ! IMPLICIT OUTPUTS:
; 1059        1965  1 !
; 1060        1966  1 !       NONE
; 1061        1967  1 !
; 1062        1968  1 ! COMPLETION CODES:
; 1063        1969  1 !
; 1064        1970  1 !       NONE
; 1065        1971  1 !
; 1066        1972  1 ! SIDE EFFECTS:
; 1067        1973  1 !
; 1068        1974  1 !       NONE
; 1069        1975  1 !
; 1070        1976  1 !--
; 1071        1977  1
; 1072        1978  2     BEGIN
; 1073        1979  2
; 1074        1980  2     GLOBAL REGISTER
; 1075        1981  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1076        1982  2
; 1077        1983  2     CCB = .OTS$$A_CUR_LUB;
; 1078        1984  2 !+
; 1079        1985  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1080        1986  2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1081        1987  2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1082        1988  2 !-
; 1083        1989  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_G,
; 1084        1990  2                                                       ! data type
; 1085        1991  2         K_GFLOAT_LEN,                                 ! length of data type
; 1086        1992  2         ELEM,                                         ! address of value
; 1087        1993  2         BAS$K_SEMI_FORM                               ! semicolon format character
; 1088        1994  2     );
; 1089        1995  2     RETURN;
; 1090        1996  1     END;                                              !End of BAS$OUT_G_V_S


                                        0800 00000      .ENTRY  BAS$OUT_G_V_S, Save R11                  ; 1946
```

```
                              5B 00000000G  00  D0 00002           MOVL    OTS$$A_CUR_LUB, CCB                   ; 1983
                              50      FF71  CB  9A 00009           MOVZBL  -143(CCB), R0                         ; 1989
                              50 00000000G0040  D0 0000E           MOVL    BAS$$AA_UDF_PR1-104[R0], R0           ;
                                            01  DD 00016           PUSHL   #1                                    ;
                                       04   AC  9F 00018           PUSHAB  ELEM                                  ;
                                            08  DD 0001B           PUSHL   #8                                    ;
                                            1B  DD 0001D           PUSHL   #27                                   ;
                      00000000G0040         04  FB 0001F           CALLS   #4, BAS$$AA_UDF_PR1[R0]               ;
                                                04 00027           RET                                           ; 1996

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 0269
; 1092      1997  1 GLOBAL ROUTINE BAS$OUT_G_V_C (                               ! output g float by value, comma format
; 1093      1998  1         ELEM                                                 ! element to print
; 1094      1999  1     ) : NOVALUE =                                            !
; 1095      2000  1
; 1096      2001  1 !++
; 1097      2002  1 ! FUNCTIONAL DESCRIPTION:
; 1098      2003  1 !
; 1099      2004  1 ! Print a gfloat number passed by value, with comma format
; 1100      2005  1 !
; 1101      2006  1 ! FORMAL PARAMETERS:
; 1102      2007  1 !
; 1103      2008  1 !       ELEM.rg.v                gfloat to print
; 1104      2009  1 !
; 1105      2010  1 ! IMPLICIT INPUTS:
; 1106      2011  1 !
; 1107      2012  1 !       OTS$$A_CUR_LUB           current Logical Unit Block
; 1108      2013  1 !       ISB$B_STTM_TYPE          statement type of this I/O statement
; 1109      2014  1 !
; 1110      2015  1 ! IMPLICIT OUTPUTS:
; 1111      2016  1 !
; 1112      2017  1 !       NONE
; 1113      2018  1 !
; 1114      2019  1 ! COMPLETION CODES:
; 1115      2020  1 !
; 1116      2021  1 !       NONE
; 1117      2022  1 !
; 1118      2023  1 ! SIDE EFFECTS:
; 1119      2024  1 !
; 1120      2025  1 !       NONE
; 1121      2026  1 !
; 1122      2027  1 !--
; 1123      2028  1
; 1124      2029  2     BEGIN
; 1125      2030  2
; 1126      2031  2     GLOBAL REGISTER
; 1127      2032  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1128      2033  2
; 1129      2034  2     CCB = .OTS$$A_CUR_LUB;
; 1130      2035  2 !+
; 1131      2036  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1132      2037  2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1133      2038  2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1134      2039  2 !-
; 1135      2040  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_G,
; 1136      2041  2                                                          ! data type
; 1137      2042  2         K_GFLOAT_LEN,                                    ! length of data type
; 1138      2043  2         ELEM,                                            ! address of value
; 1139      2044  2         BAS$K_COMMA_FOR                                  ! comma format character
; 1140      2045  2     );
; 1141      2046  2     RETURN;
; 1142      2047  1     END;                                                 !End of BAS$OUT_G_V_C



                                        0800 00000      .ENTRY  BAS$OUT_G_V_C, Save R11                          ; 1997
```

```
                          5B 00000000G  00  D0 00002            MOVL    OTS$$A_CUR_LUB, CCB                       ; 2034
                          50      FF71  CB  9A 00009            MOVZBL  -143(CCB), R0                             ; 2040
                          50 00000000G0040  D0 0000E            MOVL    BAS$$AA_UDF_PR1-104[R0], R0               ;
                                        02  DD 00016            PUSHL   #2                                        ;
                                   04   AC  9F 00018            PUSHAB  ELEM                                      ;
                                        08  DD 0001B            PUSHL   #8                                        ;
                                        1B  DD 0001D            PUSHL   #27                                       ;
                 00000000G0040          04  FB 0001F            CALLS   #4, BAS$$AA_UDF_PR1[R0]                   ;
                                            04 00027            RET                                               ; 2047

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 0291
; 1144          2048  1 GLOBAL ROUTINE BAS$OUT_G_V_B (                          ! print gfloat, blank format
; 1145          2049  1         ELEM                                            ! element to print
; 1146          2050  1     ) : NOVALUE =                                       !
; 1147          2051  1
; 1148          2052  1 !++
; 1149          2053  1 ! FUNCTIONAL DESCRIPTION:
; 1150          2054  1 !
; 1151          2055  1 ! Print a gfloat number passed by value, with a blank terminator
; 1152          2056  1 !
; 1153          2057  1 ! FORMAL PARAMETERS:
; 1154          2058  1 !
; 1155          2059  1 !       ELEM.rg.v                       gfloat to print
; 1156          2060  1 !
; 1157          2061  1 ! IMPLICIT INPUTS:
; 1158          2062  1 !
; 1159          2063  1 !       OTS$$A_CUR_LUB                  current Logical Unit Block
; 1160          2064  1 !       ISB$B_STTM_TYPE                 statement type of this I/O statement
; 1161          2065  1 !
; 1162          2066  1 ! IMPLICIT OUTPUTS:
; 1163          2067  1 !
; 1164          2068  1 !       NONE
; 1165          2069  1 !
; 1166          2070  1 ! COMPLETION CODES:
; 1167          2071  1 !
; 1168          2072  1 !       NONE
; 1169          2073  1 !
; 1170          2074  1 ! SIDE EFFECTS:
; 1171          2075  1 !
; 1172          2076  1 !       NONE
; 1173          2077  1 !
; 1174          2078  1 !--
; 1175          2079  1
; 1176          2080  2     BEGIN
; 1177          2081  2
; 1178          2082  2     GLOBAL REGISTER
; 1179          2083  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1180          2084  2
; 1181          2085  2     CCB = .OTS$$A_CUR_LUB;
; 1182          2086  2 !+
; 1183          2087  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1184          2088  2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1185          2089  2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1186          2090  2 !-
; 1187          2091  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_G,
; 1188          2092  2                                                         ! data type
; 1189          2093  2         K_GFLOAT_LEN,                                   ! length of data type
; 1190          2094  2         ELEM,                                           ! address of value
; 1191          2095  2         BAS$K_NO_FORM                                   ! no format character
; 1192          2096  2     );
; 1193          2097  2     RETURN;
; 1194          2098  1     END;                                                !End of BAS$OUT_G_V_B



                                              0800 00000        .ENTRY  BAS$OUT_G_V_B, Save R11                              ; 2048
```

```
                        5B 00000000G  00  D0 00002          MOVL     OTS$$A_CUR_LUB, CCB                       ; 2085
                        50      FF71  CB  9A 00009          MOVZBL   -143(CCB), R0                             ; 2091
                        50 00000000G0040  D0 0000E          MOVL     BAS$$AA_UDF_PR1-104[R0], R0               ;
                                      03  DD 00016          PUSHL    #3                                        ;
                                04    AC  9F 00018          PUSHAB   ELEM                                      ;
                                      08  DD 0001B          PUSHL    #8                                        ;
                                      1B  DD 0001D          PUSHL    #27                                       ;
              00000000G0040           04  FB 0001F          CALLS    #4, BAS$$AA_UDF_PR1[R0]                   ;
                                          04 00027          RET                                                ; 2098

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 02B9
; 1196         2099  1 GLOBAL ROUTINE BAS$IN_B_R (                             ! input byte by ref
; 1197         2100  1         ELEM                                            ! element to input by reference
; 1198         2101  1     ) : NOVALUE =                                       !
; 1199         2102  1
; 1200         2103  1 !++
; 1201         2104  1 ! FUNCTIONAL DESCRIPTION:
; 1202         2105  1 !
; 1203         2106  1 ! Input a byte, the destination is passed by reference
; 1204         2107  1 !
; 1205         2108  1 ! FORMAL PARAMETERS:
; 1206         2109  1 !
; 1207         2110  1 !       ELEM.rb.r                 where to store the byte input
; 1208         2111  1 !
; 1209         2112  1 ! IMPLICIT INPUTS:
; 1210         2113  1 !
; 1211         2114  1 !       OTS$$A_CUR_LUB            current Logical Unit Block
; 1212         2115  1 !       ISB$B_STTM_TYPE           statement type of this I/O statement
; 1213         2116  1 !
; 1214         2117  1 ! IMPLICIT OUTPUTS:
; 1215         2118  1 !
; 1216         2119  1 !       NONE
; 1217         2120  1 !
; 1218         2121  1 ! COMPLETION CODES:
; 1219         2122  1 !
; 1220         2123  1 !       NONE
; 1221         2124  1 !
; 1222         2125  1 ! SIDE EFFECTS:
; 1223         2126  1 !
; 1224         2127  1 !       NONE
; 1225         2128  1 !
; 1226         2129  1 !--
; 1227         2130  1
; 1228         2131  2     BEGIN
; 1229         2132  2
; 1230         2133  2     GLOBAL REGISTER
; 1231         2134  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1232         2135  2
; 1233         2136  2     CCB = .OTS$$A_CUR_LUB;
; 1234         2137  2     BAS$$UDF_RL1 (DSC$K_DTYPE_B,                        ! data type byte
; 1235         2138  2         K_GFLOAT_LEN,                                   ! length of data type
; 1236         2139  2         .ELEM,                                          ! address of destination
; 1237         2140  2         BAS$K_NULL);                                    ! null format character
; 1238         2141  2     RETURN;
; 1239         2142  1     END;                                                !End of BAS$IN_B_R



                                     0800 00000          .ENTRY  BAS$IN_B_R, Save R11                          ; 2099
                5B 00000000G   00    D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                           ; 2136
                               7E    D4 00009          CLRL    -(SP)                                         ; 2137
                       04      AC    DD 0000B          PUSHL   ELEM                                          ; 2139
                               08    DD 0000E          PUSHL   #8                                            ; 2137
                               06    DD 00010          PUSHL   #6                                            ;
          00000000G   00       04    FB 00012          CALLS   #4, BAS$$UDF_RL1                              ;
                                     04 00019          RET                                                   ; 2142
```

```
; Routine Size:  26 bytes,    Routine Base:  _BAS$CODE + 02E1
; 1241           2143  1 GLOBAL ROUTINE BAS$OUT_H_V_S (                        ! print hfloat with semi format
; 1242           2144  1          ELEM                                         ! element to print
; 1243           2145  1     ) : NOVALUE =                                     !
; 1244           2146  1
; 1245           2147  1 !++
; 1246           2148  1 ! FUNCTIONAL DESCRIPTION:
; 1247           2149  1 !
; 1248           2150  1 ! Print an hfloat number passed by value, with semi colon format
; 1249           2151  1 !
; 1250           2152  1 ! FORMAL PARAMETERS:
; 1251           2153  1 !
; 1252           2154  1 !        ELEM.rh.v                  hfloat to print
; 1253           2155  1 !
; 1254           2156  1 ! IMPLICIT INPUTS:
; 1255           2157  1 !
; 1256           2158  1 !        OTS$$A_CUR_LUB             current Logical Unit Block
; 1257           2159  1 !        ISB$B_STTM_TYPE            statement type of this I/O statement
; 1258           2160  1 !
; 1259           2161  1 ! IMPLICIT OUTPUTS:
; 1260           2162  1 !
; 1261           2163  1 !        NONE
; 1262           2164  1 !
; 1263           2165  1 ! COMPLETION CODES:
; 1264           2166  1 !
; 1265           2167  1 !        NONE
; 1266           2168  1 !
; 1267           2169  1 ! SIDE EFFECTS:
; 1268           2170  1 !
; 1269           2171  1 !        NONE
; 1270           2172  1 !
; 1271           2173  1 !--
; 1272           2174  1
; 1273           2175  2     BEGIN
; 1274           2176  2
; 1275           2177  2     GLOBAL REGISTER
; 1276           2178  2          CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1277           2179  2
; 1278           2180  2     CCB = .OTS$$A_CUR_LUB;
; 1279           2181  2 !+
; 1280           2182  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1281           2183  2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1282           2184  2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1283           2185  2 !-
; 1284           2186  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_H,
; 1285           2187  2                                                       ! data type
; 1286           2188  2          K_HFLOAT_LEN,                                ! length of data type
; 1287           2189  2          ELEM,                                        ! address of value
; 1288           2190  2          BAS$K_SEMI_FORM                              ! semicolon format character
; 1289           2191  2     );
; 1290           2192  2     RETURN;
; 1291           2193  1     END;                                             !End of BAS$OUT_H_V_S



                                   0800 00000         .ENTRY  BAS$OUT_H_V_S, Save R11                           ; 2143
                                   5B 00000000G  00  D0 00002            MOVL    OTS$$A_CUR_LUB, CCB                       ; 2180
                                   50      FF71  CB  9A 00009            MOVZBL  -143(CCB), R0                             ; 2186
                                   50 00000000G0040  D0 0000E            MOVL    BAS$$AA_UDF_PR1-104[R0], R0               ;
                                                 01  DD 00016            PUSHL   #1                                        ;
                                         04      AC  9F 00018            PUSHAB  ELEM                                      ;
                                                 10  DD 0001B            PUSHL   #16                                       ;
                                                 1C  DD 0001D            PUSHL   #28                                       ;
                        00000000G0040            04  FB 0001F            CALLS   #4, BAS$$AA_UDF_PR1[R0]                   ;
                                                     04 00027            RET                                               ; 2193

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 02FB
; 1293       2194   1 GLOBAL ROUTINE BAS$OUT_H_V_C (                  ! print hfloat with comma format
; 1294       2195   1         ELEM                                     ! element to print
; 1295       2196   1     ) : NOVALUE =                                !
; 1296       2197   1
; 1297       2198   1 !++
; 1298       2199   1 ! FUNCTIONAL DESCRIPTION:
; 1299       2200   1 !
; 1300       2201   1 ! Print an hfloat number passed by value, with comma format
; 1301       2202   1 !
; 1302       2203   1 ! FORMAL PARAMETERS:
; 1303       2204   1 !
; 1304       2205   1 !       ELEM.rh.v               hfloat to print
; 1305       2206   1 !
; 1306       2207   1 ! IMPLICIT INPUTS:
; 1307       2208   1 !
; 1308       2209   1 !       OTS$$A_CUR_LUB          current Logical Unit Block
; 1309       2210   1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
; 1310       2211   1 !
; 1311       2212   1 ! IMPLICIT OUTPUTS:
; 1312       2213   1 !
; 1313       2214   1 !       NONE
; 1314       2215   1 !
; 1315       2216   1 ! COMPLETION CODES:
; 1316       2217   1 !
; 1317       2218   1 !       NONE
; 1318       2219   1 !
; 1319       2220   1 ! SIDE EFFECTS:
; 1320       2221   1 !
; 1321       2222   1 !       NONE
; 1322       2223   1 !
; 1323       2224   1 !--
; 1324       2225   1
; 1325       2226   2     BEGIN
; 1326       2227   2
; 1327       2228   2     GLOBAL REGISTER
; 1328       2229   2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1329       2230   2
; 1330       2231   2     CCB = .OTS$$A_CUR_LUB;
; 1331       2232   2 !+
; 1332       2233   2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1333       2234   2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1334       2235   2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1335       2236   2 !-
; 1336       2237   2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_H,
; 1337       2238   2                                                  ! data type
; 1338       2239   2         K_HFLOAT_LEN,                            ! length of data type
; 1339       2240   2         ELEM,                                    ! address of value
; 1340       2241   2         BAS$K_COMMA_FOR                          ! comma format character
; 1341       2242   2     );
; 1342       2243   2     RETURN;
; 1343       2244   1     END;                                         !End of BAS$OUT_H_DX_C



                                   0800 00000         .ENTRY  BAS$OUT_H_V_C, Save R11                      ; 2194
```

```
                         5B 00000000G  00  D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                                  ; 2231
                         50      FF71  CB  9A 00009          MOVZBL  -143(CCB), R0                                        ; 2237
                         50 00000000G0040  D0 0000E          MOVL    BAS$$AA_UDF_PR1-104[R0], R0                          ;
                                       02  DD 00016          PUSHL   #2                                                   ;
                                   04  AC  9F 00018          PUSHAB  ELEM                                                 ;
                                       10  DD 0001B          PUSHL   #16                                                  ;
                                       1C  DD 0001D          PUSHL   #28                                                  ;
             00000000G0040             04  FB 0001F          CALLS   #4, BAS$$AA_UDF_PR1[R0]                              ;
                                           04 00027          RET                                                          ; 2244

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 0323
; 1345      2245  1 GLOBAL ROUTINE BAS$OUT_H_V_B (                   ! print hfloat with blank format
; 1346      2246  1         ELEM                                      ! element to print
; 1347      2247  1     ) : NOVALUE =                                 !
; 1348      2248  1
; 1349      2249  1 !++
; 1350      2250  1 ! FUNCTIONAL DESCRIPTION:
; 1351      2251  1 !
; 1352      2252  1 ! Print an hfloat number passed by value, with blank format
; 1353      2253  1 !
; 1354      2254  1 ! FORMAL PARAMETERS:
; 1355      2255  1 !
; 1356      2256  1 !       ELEM.rh.v               hfloat to print
; 1357      2257  1 !
; 1358      2258  1 ! IMPLICIT INPUTS:
; 1359      2259  1 !
; 1360      2260  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
; 1361      2261  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
; 1362      2262  1 !
; 1363      2263  1 ! IMPLICIT OUTPUTS:
; 1364      2264  1 !
; 1365      2265  1 !       NONE
; 1366      2266  1 !
; 1367      2267  1 ! COMPLETION CODES:
; 1368      2268  1 !
; 1369      2269  1 !       NONE
; 1370      2270  1 !
; 1371      2271  1 ! SIDE EFFECTS:
; 1372      2272  1 !
; 1373      2273  1 !       NONE
; 1374      2274  1 !
; 1375      2275  1 !--
; 1376      2276  1
; 1377      2277  2     BEGIN
; 1378      2278  2
; 1379      2279  2     GLOBAL REGISTER
; 1380      2280  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1381      2281  2
; 1382      2282  2     CCB = .OTS$$A_CUR_LUB;
; 1383      2283  2 !+
; 1384      2284  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1385      2285  2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1386      2286  2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1387      2287  2 !-
; 1388      2288  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_H,
; 1389      2289  2                                                   ! data type
; 1390      2290  2         K_HFLOAT_LEN,                             ! length of data type
; 1391      2291  2         ELEM,                                     ! address of value
; 1392      2292  2         BAS$K_NO_FORM                             ! no format character
; 1393      2293  2     );
; 1394      2294  2     RETURN;
; 1395      2295  1     END;                                          !End of BAS$OUT_H_DX_B



                                0800 00000        .ENTRY  BAS$OUT_H_V_B, Save R11                    ; 2245
```

```
                        5B 00000000G  00  D0 00002         MOVL     OTS$$A_CUR_LUB, CCB                       ; 2282
                        50      FF71  CB  9A 00009         MOVZBL   -143(CCB), R0                             ; 2288
                        50 00000000G0040  D0 0000E         MOVL     BAS$$AA_UDF_PR1-104[R0], R0               ;
                                      03  DD 00016         PUSHL    #3                                        ;
                                04    AC  9F 00018         PUSHAB   ELEM                                      ;
                                      10  DD 0001B         PUSHL    #16                                       ;
                                      1C  DD 0001D         PUSHL    #28                                       ;
                  00000000G0040       04  FB 0001F         CALLS    #4, BAS$$AA_UDF_PR1[R0]                   ;
                                          04 00027         RET                                                ; 2295

; Routine Size:  40 bytes,    Routine Base:  _BAS$CODE + 034B
```

```
1 GLOBAL ROUTINE BAS$OUT_P_DX_S (                               ! print packed with semi format
1         ELEM                                                  ! element to print
1     ) : NOVALUE =                                             !
1
1 !++
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 ! Print a packed decimal value passed by desc, with semi colon format
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       ELEM.rp.dx                      packed to print
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       OTS$$A_CUR_LUB                  current Logical Unit Block
1 !       ISB$B_STTM_TYPE                 statement type of this I/O statement
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION CODES:
1 !
1 !       NONE
1 !
1 ! SIDE EFFECTS:
1 !
1 !       NONE
1 !
1 !--
1
2     BEGIN
2
2     GLOBAL REGISTER
2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
2
2     MAP
2         ELEM : REF BLOCK [8,BYTE];
2
2     CCB = .OTS$$A_CUR_LUB;
2 !+
2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
2 ! element transmit for prompting or for printing.  Therefore, based on the
2 ! statement type, either the INPUT or the PRINT UDF will be called.
2 !-
2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_P,
2                                                               ! data type
2         .ELEM [DSC$W_LENGTH],                                 ! length of data type
2         .ELEM,                                                ! address of value
2         BAS$K_SEMI_FORM                                       ! semicolon format character
2     );
2     RETURN;
1     END;                                                      !End of BAS$OUT_B_V_S
```

```
                                  0800 00000     .ENTRY  BAS$OUT_P_DX_S, Save R11                  ; 2296
                5B 00000000G  00    D0 00002     MOVL    OTS$$A_CUR_LUB, CCB                       ; 2336
                50      FF71  CB    9A 00009     MOVZBL  -143(CCB), R0                             ; 2342
                50 00000000G0040    D0 0000E     MOVL    BAS$$AA_UDF_PR1-104[R0], R0               ;
                              01    DD 00016     PUSHL   #1                                        ;
                        04    AC    DD 00018     PUSHL   ELEM                                      ; 2345
                7E      04    BC    3C 0001B     MOVZWL  @ELEM, -(SP)                              ; 2344
                              15    DD 0001F     PUSHL   #21                                       ; 2342
         00000000G0040        04    FB 00021     CALLS   #4, BAS$$AA_UDF_PR1[R0]                   ;
                                    04 00029     RET                                               ; 2349

; Routine Size:  42 bytes,    Routine Base:  _BAS$CODE + 0373
; 1452       2350  1 GLOBAL ROUTINE BAS$OUT_P_DX_C (                    ! print packed with comma format
; 1453       2351  1         ELEM                                        ! element to print
; 1454       2352  1     ) : NOVALUE =                                   !
; 1455       2353  1
; 1456       2354  1 !++
; 1457       2355  1 ! FUNCTIONAL DESCRIPTION:
; 1458       2356  1 !
; 1459       2357  1 ! Print a packed decimal value passed by desc, with comma format
; 1460       2358  1 !
; 1461       2359  1 ! FORMAL PARAMETERS:
; 1462       2360  1 !
; 1463       2361  1 !       ELEM.rp.dx              packed to print
; 1464       2362  1 !
; 1465       2363  1 ! IMPLICIT INPUTS:
; 1466       2364  1 !
; 1467       2365  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
; 1468       2366  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
; 1469       2367  1 !
; 1470       2368  1 ! IMPLICIT OUTPUTS:
; 1471       2369  1 !
; 1472       2370  1 !       NONE
; 1473       2371  1 !
; 1474       2372  1 ! COMPLETION CODES:
; 1475       2373  1 !
; 1476       2374  1 !       NONE
; 1477       2375  1 !
; 1478       2376  1 ! SIDE EFFECTS:
; 1479       2377  1 !
; 1480       2378  1 !       NONE
; 1481       2379  1 !
; 1482       2380  1 !--
; 1483       2381  1
; 1484       2382  2     BEGIN
; 1485       2383  2
; 1486       2384  2     GLOBAL REGISTER
; 1487       2385  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1488       2386  2
; 1489       2387  2     MAP
; 1490       2388  2         ELEM : REF BLOCK [8, BYTE];
; 1491       2389  2
; 1492       2390  2     CCB = .OTS$$A_CUR_LUB;
; 1493       2391  2 !+
; 1494       2392  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1495       2393  2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1496       2394  2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1497       2395  2 !-
; 1498       2396  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_P,
; 1499       2397  2                                                      ! data type
; 1500       2398  2         .ELEM [DSC$W_LENGTH],                        ! length of data type
; 1501       2399  2         .ELEM,                                       ! address of value
; 1502       2400  2         BAS$K_COMMA_FOR                              ! comma format character
; 1503       2401  2     );
; 1504       2402  2     RETURN;
; 1505       2403  1     END;                                             !End of BAS$OUT_P_DX_C
```

```
                               0800 00000          .ENTRY  BAS$OUT_P_DX_C, Save R11                      ; 2350
           5B 00000000G    00   D0 00002           MOVL    OTS$$A_CUR_LUB, CCB                           ; 2390
           50      FF71    CB   9A 00009           MOVZBL  -143(CCB), R0                                 ; 2396
           50 00000000G0040     D0 0000E           MOVL    BAS$$AA_UDF_PR1-104[R0], R0                   ;
                           02   DD 00016           PUSHL   #2                                            ;
                   04      AC   DD 00018           PUSHL   ELEM                                          ; 2399
           7E      04      BC   3C 0001B           MOVZWL  @ELEM, -(SP)                                  ; 2398
                           15   DD 0001F           PUSHL   #21                                           ; 2396
     00000000G0040         04   FB 00021           CALLS   #4, BAS$$AA_UDF_PR1[R0]                       ;
                                04 00029           RET                                                   ; 2403

; Routine Size:  42 bytes,    Routine Base:  _BAS$CODE + 039D
; 1507          2404  1 GLOBAL ROUTINE BAS$OUT_P_DX_B(                        ! print packed with blank format
; 1508          2405  1         ELEM                                           ! element to print
; 1509          2406  1     ) : NOVALUE =                                      !
; 1510          2407  1
; 1511          2408  1 !++
; 1512          2409  1 ! FUNCTIONAL DESCRIPTION:
; 1513          2410  1 !
; 1514          2411  1 ! Print a packed decimal value passed by desc, with blank format
; 1515          2412  1 !
; 1516          2413  1 ! FORMAL PARAMETERS:
; 1517          2414  1 !
; 1518          2415  1 !       ELEM.rp.dx              packed to print
; 1519          2416  1 !
; 1520          2417  1 ! IMPLICIT INPUTS:
; 1521          2418  1 !
; 1522          2419  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
; 1523          2420  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
; 1524          2421  1 !
; 1525          2422  1 ! IMPLICIT OUTPUTS:
; 1526          2423  1 !
; 1527          2424  1 !       NONE
; 1528          2425  1 !
; 1529          2426  1 ! COMPLETION CODES:
; 1530          2427  1 !
; 1531          2428  1 !       NONE
; 1532          2429  1 !
; 1533          2430  1 ! SIDE EFFECTS:
; 1534          2431  1 !
; 1535          2432  1 !       NONE
; 1536          2433  1 !
; 1537          2434  1 !--
; 1538          2435  1
; 1539          2436  2     BEGIN
; 1540          2437  2
; 1541          2438  2     GLOBAL REGISTER
; 1542          2439  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1543          2440  2
; 1544          2441  2     MAP
; 1545          2442  2         ELEM : REF BLOCK [8, BYTE];
; 1546          2443  2
; 1547          2444  2     CCB = .OTS$$A_CUR_LUB;
; 1548          2445  2 !+
; 1549          2446  2 ! Dispatch to the UDF level.  Dispatching is done because this may be a PRINT
; 1550          2447  2 ! element transmit for prompting or for printing.  Therefore, based on the
; 1551          2448  2 ! statement type, either the INPUT or the PRINT UDF will be called.
; 1552          2449  2 !-
; 1553          2450  2     (BAS$$AA_UDF_PR1 + .BAS$$AA_UDF_PR1 [.CCB [ISB$B_STTM_TYPE] - ISB$K_BASSTTYLO + 1]) (DSC$K_DTYPE_P,
; 1554          2451  2                                                        ! data type
; 1555          2452  2         .ELEM [DSC$W_LENGTH],                          ! length of data type
; 1556          2453  2         .ELEM,                                         ! address of value
; 1557          2454  2         BAS$K_NO_FORM                                  ! no format character
; 1558          2455  2     );
; 1559          2456  2     RETURN;
; 1560          2457  1     END;                                               !End of BAS$OUT_P_DX_B
```

```
                          0800 00000        .ENTRY  BAS$OUT_P_DX_B, Save R11                  ; 2404
        5B 00000000G   00   D0 00002        MOVL    OTS$$A_CUR_LUB, CCB                       ; 2444
        50       FF71  CB   9A 00009        MOVZBL  -143(CCB), R0                             ; 2450
        50 00000000G0040    D0 0000E        MOVL    BAS$$AA_UDF_PR1-104[R0], R0               ;
                       03   DD 00016        PUSHL   #3                                        ;
                  04   AC   DD 00018        PUSHL   ELEM                                      ; 2453
        7E        04   BC   3C 0001B        MOVZWL  @ELEM, -(SP)                              ; 2452
                       15   DD 0001F        PUSHL   #21                                       ; 2450
00000000G0040          04   FB 00021        CALLS   #4, BAS$$AA_UDF_PR1[R0]                   ;
                            04 00029        RET                                               ; 2457

; Routine Size:  42 bytes,    Routine Base:  _BAS$CODE + 03C7
; 1562          2458  1 GLOBAL ROUTINE BAS$IN_G_R (                               ! input gfloat by ref
; 1563          2459  1         ELEM                                              ! element to input by reference
; 1564          2460  1     ) : NOVALUE =                                         !
; 1565          2461  1
; 1566          2462  1 !++
; 1567          2463  1 ! FUNCTIONAL DESCRIPTION:
; 1568          2464  1 !
; 1569          2465  1 ! Input a gfloat, the destination is passed by reference
; 1570          2466  1 !
; 1571          2467  1 ! FORMAL PARAMETERS:
; 1572          2468  1 !
; 1573          2469  1 !       ELEM.rg.r               where to store the gfloat input
; 1574          2470  1 !
; 1575          2471  1 ! IMPLICIT INPUTS:
; 1576          2472  1 !
; 1577          2473  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
; 1578          2474  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
; 1579          2475  1 !
; 1580          2476  1 ! IMPLICIT OUTPUTS:
; 1581          2477  1 !
; 1582          2478  1 !       NONE
; 1583          2479  1 !
; 1584          2480  1 ! COMPLETION CODES:
; 1585          2481  1 !
; 1586          2482  1 !       NONE
; 1587          2483  1 !
; 1588          2484  1 ! SIDE EFFECTS:
; 1589          2485  1 !
; 1590          2486  1 !       NONE
; 1591          2487  1 !
; 1592          2488  1 !--
; 1593          2489  1
; 1594          2490  2     BEGIN
; 1595          2491  2
; 1596          2492  2     GLOBAL REGISTER
; 1597          2493  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1598          2494  2
; 1599          2495  2     CCB = .OTS$$A_CUR_LUB;
; 1600          2496  2     BAS$$UDF_RL1 (DSC$K_DTYPE_G,                          ! data type gfloat
; 1601          2497  2         K_GFLOAT_LEN,                                     ! length of data type
; 1602          2498  2         .ELEM,                                            ! address of destination
; 1603          2499  2         BAS$K_NULL);                                      ! null format character
; 1604          2500  2     RETURN;
; 1605          2501  1     END;                                                  !End of BAS$IN_G_R



                                 0800 00000         .ENTRY  BAS$IN_G_R, Save R11                  ; 2458
             5B 00000000G     00   D0 00002         MOVL    OTS$$A_CUR_LUB, CCB                   ; 2495
                              7E   D4 00009         CLRL    -(SP)                                 ; 2496
                      04      AC   DD 0000B         PUSHL   ELEM                                  ; 2498
                              08   DD 0000E         PUSHL   #8                                    ; 2496
                              1B   DD 00010         PUSHL   #27                                   ;
        00000000G  00         04   FB 00012         CALLS   #4, BAS$$UDF_RL1                      ;
                                   04 00019         RET                                           ; 2501
```

```
; Routine Size:  26 bytes,    Routine Base:  _BAS$CODE + 03F1
; 1607          2502  1 GLOBAL ROUTINE BAS$IN_H_R (                                  ! input hfloat by ref
; 1608          2503  1         ELEM                                                 ! element to input by reference
; 1609          2504  1     ) : NOVALUE =                                            !
; 1610          2505  1
; 1611          2506  1 !++
; 1612          2507  1 ! FUNCTIONAL DESCRIPTION:
; 1613          2508  1 !
; 1614          2509  1 ! Input an hfloat, the destination is passed by reference
; 1615          2510  1 !
; 1616          2511  1 ! FORMAL PARAMETERS:
; 1617          2512  1 !
; 1618          2513  1 !       ELEM.rh.r               where to store the hfloat input
; 1619          2514  1 !
; 1620          2515  1 ! IMPLICIT INPUTS:
; 1621          2516  1 !
; 1622          2517  1 !       OTS$$A_CUR_LUB          current Logical Unit Block
; 1623          2518  1 !       ISB$B_STTM_TYPE         statement type of this I/O statement
; 1624          2519  1 !
; 1625          2520  1 ! IMPLICIT OUTPUTS:
; 1626          2521  1 !
; 1627          2522  1 !       NONE
; 1628          2523  1 !
; 1629          2524  1 ! COMPLETION CODES:
; 1630          2525  1 !
; 1631          2526  1 !       NONE
; 1632          2527  1 !
; 1633          2528  1 ! SIDE EFFECTS:
; 1634          2529  1 !
; 1635          2530  1 !       NONE
; 1636          2531  1 !
; 1637          2532  1 !--
; 1638          2533  1
; 1639          2534  2     BEGIN
; 1640          2535  2
; 1641          2536  2     GLOBAL REGISTER
; 1642          2537  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1643          2538  2
; 1644          2539  2     CCB = .OTS$$A_CUR_LUB;
; 1645          2540  2     BAS$$UDF_RL1 (DSC$K_DTYPE_H,                             ! data type hfloat
; 1646          2541  2         K_HFLOAT_LEN,                                        ! length of data type
; 1647          2542  2         .ELEM,                                               ! address of destination
; 1648          2543  2         BAS$K_NULL);                                         ! null format character
; 1649          2544  2     RETURN;
; 1650          2545  1     END;                                                     !End of BAS$IN_H_R



                                  0800 00000            .ENTRY  BAS$IN_H_R, Save R11                            ; 2502
             5B 00000000G    00    D0 00002            MOVL    OTS$$A_CUR_LUB, CCB                             ; 2539
                             7E    D4 00009            CLRL    -(SP)                                           ; 2540
                       04    AC    DD 0000B            PUSHL   ELEM                                            ; 2542
                             10    DD 0000E            PUSHL   #16                                             ; 2540
                             1C    DD 00010            PUSHL   #28                                             ;
        00000000G  00        04    FB 00012            CALLS   #4, BAS$$UDF_RL1                                ;
                                   04 00019            RET                                                     ; 2545
```

```
; Routine Size:  26 bytes,    Routine Base:  _BAS$CODE + 040B

; 1651          2546  1
; 1653          2547  1 GLOBAL ROUTINE BAS$IN_P_DX (                      ! input packed decimal by desc.
; 1654          2548  1         ELEM                                      ! element to input by reference
; 1655          2549  1     ) : NOVALUE =                                 !
; 1656          2550  1
; 1657          2551  1 !++
; 1658          2552  1 ! FUNCTIONAL DESCRIPTION:
; 1659          2553  1 !
; 1660          2554  1 ! Input packed decimal, the destination is passed by descriptor
; 1661          2555  1 !
; 1662          2556  1 ! FORMAL PARAMETERS:
; 1663          2557  1 !
; 1664          2558  1 !       ELEM.rp.dx               where to store the packed input
; 1665          2559  1 !
; 1666          2560  1 ! IMPLICIT INPUTS:
; 1667          2561  1 !
; 1668          2562  1 !       OTS$$A_CUR_LUB           current Logical Unit Block
; 1669          2563  1 !       ISB$B_STTM_TYPE          statement type of this I/O statement
; 1670          2564  1 !
; 1671          2565  1 ! IMPLICIT OUTPUTS:
; 1672          2566  1 !
; 1673          2567  1 !       NONE
; 1674          2568  1 !
; 1675          2569  1 ! COMPLETION CODES:
; 1676          2570  1 !
; 1677          2571  1 !       NONE
; 1678          2572  1 !
; 1679          2573  1 ! SIDE EFFECTS:
; 1680          2574  1 !
; 1681          2575  1 !       NONE
; 1682          2576  1 !
; 1683          2577  1 !--
; 1684          2578  1
; 1685          2579  2     BEGIN
; 1686          2580  2
; 1687          2581  2     GLOBAL REGISTER
; 1688          2582  2         CCB = K_CCB_REG : REF BLOCK [, BYTE];
; 1689          2583  2
; 1690          2584  2     MAP
; 1691          2585  2         ELEM : REF BLOCK [8, BYTE];
; 1692          2586  2
; 1693          2587  2     CCB = .OTS$$A_CUR_LUB;
; 1694          2588  2     BAS$$UDF_RL1 (DSC$K_DTYPE_P,                  ! data type
; 1695          2589  2         ELEM [DSC$W_LENGTH],                      ! string length
; 1696          2590  2         .ELEM,                                    ! address of descriptor
; 1697          2591  2         BAS$K_NULL);                              ! null format character
; 1698          2592  2     RETURN;
; 1699          2593  1     END;                                          !End of BAS$IN_P_DX



                                    0800 00000          .ENTRY  BAS$IN_P_DX, Save R11                     ; 2547
                     5B 00000000G  00   D0 00002          MOVL    OTS$$A_CUR_LUB, CCB                       ; 2587
                                   7E   D4 00009          CLRL    -(SP)                                     ; 2589
                            04     AC   DD 0000B          PUSHL   ELEM                                      ; 2590
                            04     AC   DD 0000E          PUSHL   ELEM                                      ; 2589
```

```
                                            15  DD 00011            PUSHL    #21                                ;
                      00000000G  00         04  FB 00013            CALLS    #4, BAS$$UDF_RL1                   ;
                                                04 0001A            RET                                         ; 2593

; Routine Size:  27 bytes,    Routine Base:  _BAS$CODE + 0425


; 1700          2594  1
; 1701          2595  1
; 1703          2596  1 END                                                       !End of module - BAS$UPI_TERM_IO
; 1704          2597  1
; 1705          2598  0 ELUDOM




;                                       PSECT SUMMARY
;
;       Name                      Bytes                       Attributes
;
;   _BAS$CODE                         1088  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(2)



;                                Library Statistics
;
;                                             -------- Symbols --------          Pages          Processing
;       File                                  Total    Loaded   Percent          Mapped         Time
;
;   _$255$DUA28:[SYSLIB]STARLET.L32;1          9776        10         0           581             00:01.2




;                                        COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS$:BASTERMIO/OBJ=OBJ$:BASTERMIO MSRC$:BASTERMIO/UPDATE=(ENH$:BASTERMIO
;       )

; Size:           1088 code + 0 data bytes
; Run Time:          00:27.5
; Elapsed Time:      01:10.3
; Lines/CPU Min:       5676
; Lexemes/CPU-Min: 22450
; Memory Used:   130 pages
; Compilation Complete
```

0032 AH-BT13A-SE
VAX/VMS V4.0

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